

59-57.06 (720.6)

# Article VIII. — THE ANTS OF THE BAHAMAS, WITH A LIST OF THE KNOWN WEST INDIAN SPECIES.

By WILLIAM MORTON WHEELER.

## PLATE VII.

The ant fauna of the Bahamas has remained all but unknown up to the present time. Only four species, so far as I am able to ascertain, have been recorded from these islands: Emery has mentioned *Pheidole megacephala* and *Tapinoma pruinosum*, and has described an interesting *Macromischa* (*M. pastinifera*) as occurring in the Bahamas, and Forel has added the description of another species (*M. lucayensis*) based on a single female specimen.

During May and June, 1904, the American Museum of Natural History organized an expedition to the Bahamas primarily for the purpose of enabling Mr. Frank M. Chapman to make a study of the habits and secure specimens of the American flamingo. I had the pleasure of accompanying Mr. Chapman on this expedition, for which Mr. Nathan Bill of Springfield, Mass., very generously placed his schooner, the *Gloria* at our disposal. Ants were collected in many localities on Andros Island, the largest but least frequently visited, and on New Providence, the best-known of the islands. Undoubtedly, had I been able to visit the islands outlying to the eastward and northward (Exuma, Abaco, etc.) I should have found several additional species or varieties; but those enumerated in the present paper in all probability fairly represent the ant fauna of the whole archipelago. They will, at any rate, constitute a basis for a future more detailed study of the taxonomy and distribution of these insects in the Bahamas.

Among the material collected I find only ten species new to science, and all of these are more or less closely related to well-known West Indian forms. Most interesting, perhaps, are two new species of *Macromischa*, a genus which seems to have its centre of distribution in the West Indies, a *Trachymyrmex*, a twig-inhabiting *Tapinoma*, and the rediscovery of *Camponotus inaequalis* originally described by Roger from Cuba. Several new subspecies and varieties are recorded, but a full appreciation of their value as geographical races must depend on a future biological survey of the whole Bahaman archipelago and the Antilles. As would be expected, there is a close affinity, amounting in many cases to identity, between the Andros and New Providence ants with those of Cuba on the one hand, and those of Florida on the other. Certain species, however, like

*Camponotus planatus*, which are common in tropical Florida and presumably, also, in Cuba, were not seen in the Bahamas. The widely distributed 'fire ant,' or 'hormiga brava' (*Solenopsis geminata*), appears to be absent from Andros.

Owing to their peculiar geological formation there is little soil in the Bahamas. Hence it is not surprising to find a large proportion of their Formicidæ nesting in the cavities of plants. The following forms were found in hollow twigs, the culms of tall grasses (*Uniola paniculata* L.) and sedges (*Cladium jamaicense* Crantz), or between the scale-like leaves of the epiphytic Tillandsias on the trees and bushes of the 'coppets' and 'swashes': *Cremastogaster lucayana* and its subsp. *etiolata*; *C. victima steinheili*; *Monomorium floricola*, *M. ebeninum*, *Xenomyrmex stollii floridanus* var. *lucayanus*; *Macromischa splendens*; *Cryptocerus varians*; *Pseudomyrma flavidula* and *P. elongata*; *Tapinoma littorale*; *Camponotus zonatus* var. *eburneus*; *C. inæqualis* var. *ramulorum* and var. *marcidus*, and *C. (Colobopsis) culmicola*. The following are the more interesting observations on habits and structure briefly recorded in the notes appended to the taxonomic descriptions in the body of the paper:

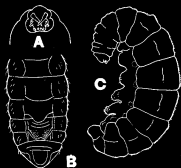
1. The ergatomorphism of the females of *Monomorium floricola* and *M. ebeninum*.
2. The record of a mixed colony of *Pseudomyrma flavidula* and *P. elongata*, apparently formed by dulosis.
3. The nesting habits of *Macromischa splendens*. These have been observed in only two other species (*M. sallei* Guér. of San Domingo and *M. subditiva* Wheeler of Texas), and show great diversity within the confines of the genus.
4. The confirmation of my former observations on the fungus-raising habits of *Cyphomyrmex rimosus*.
5. The singular habits of *Colobopsis culmicola*, which nests in the culms of *Cladium*, unlike the other known species of the subgenus, which nest in wood or galls.

As an aid to further study of the West Indian Formicidæ, I have appended to the descriptions of the Bahaman forms a general list of the known species with bibliographical notes. Additional references to the literature on many of these species will be found in the seventh volume of Dalla Torre's valuable 'Catalogus Hymenopterorum.'

#### Subfamily PONERINÆ.

1. *Platythyrea punctata* F. Smith. — A single colony comprising about thirty individuals, with three winged females and several larvæ

and pupæ, was taken, June 23, in an outhouse on the quay at Nassau. The ants were living in a wooden box, the walls of which contained a termite colony. Some of the workers and females were yellow or deep ferruginous red. This peculiar coloration, which has been noticed by Forel (Rev. Suisse Zool., ix, 1901, p. 336), is due merely to immaturity; the color of the adults is always black. The larvæ exhibit certain peculiarities not hitherto described in the Formicidæ (Figs. A, B, and C). There are no pointed tubercles covering the body as in many other Ponerinæ (*Ponera*, *Pachycondyla*, *Montomachus*, etc.), and the hairs are much shorter and sparser than in certain other forms, like *Ectatomma*, *Stigmatomma*, and *Cera-pachys*. There is a prominent rounded protuberance on the midventral surface of the fifth, and another on the corresponding region of the sixth abdominal segment. The latter protuberance is covered with yellow spinules. The head of the larva is unusually small, with rather feeble mandibles. The cocoon is cylindrical, pale yellow, and rather thin. Its posterior pole has a conspicuous black meconial spot.



Larva of *Platythyrea punctata* F. Smith.  
A, head; B, ventral surface of abdomen; C,  
whole larva, lateral aspect.

Forel is probably right in referring both *P. inconspicua* and *P. pruinosa* Mayr to Smith's species, which appears to be widely distributed through the West Indies (San Domingo, Jamaica, Barbados, Guadeloupe, Grenada, St. Vincent, and Cuba). Mr. C. F. Baker has sent me specimens from the island last mentioned (environs of Havana).

2. *Pachycondyla (Pseudoponera) stigma* Fabr. — Several colonies of this species were found on the keys along the course of the Southern Bight, Andros Island, and near the Blue Hills, N. P. The males and winged females were taken in the former locality during the latter part of May. The species, which seems to prefer the 'pine yards,' nests under stones or the bark of old pine stumps and logs in colonies numbering from a dozen to 75 or 100 individuals. The larvæ, which are tuberculate like those of *P. harpax*, and lack the glutinous dorsal tubercles of the species of *Ponera*, have been described and figured by Emery (Mem. R. Accad. Sci. Ist. Bologna, 1899, pp. 4, 5, Tab. I). *P. stigma* occurs also at Lake Worth, Florida, where specimens were collected by the late Rev. P. J. Schmitt, O. S. B.

[June, 1905.]

3. *Ponera ergatandria* Forel. — A few workers taken at Nicholl's Town on the eastern coast of Andros Island, under cocoanut boles partly buried in the sand of the sea-beach.

4. *Ponera opaciceps* Mayr. — A dealated female and three workers taken under stones in the moat surrounding Fort Charlotte, near Nassau, N. P.

5. *Anochetus* (*Stenomyrmex*) *emarginatus testaceus* Forel. — A single colony of about thirty workers was found under a stone in the Queen's Staircase at Nassau. In his notes on these ants in St. Vincent, H. H. Smith says (Trans. Ent. Soc. London, 1893, p. 358) that they "wander about helplessly and rather slowly." The specimens I observed moved with great rapidity, and nearly all of them made good their escape into the grass.

6. *Odontomachus hæmatodes insularis* Guérin var. *ruginodis* var. nov.

To this variety I assign a small form of *O. hæmatodes*, which in color and pilosity resembles specimens of *insularis* taken in Florida (Lake Worth, Enterprise, Biscayne Bay, etc.). In the worker the head, antennæ, and legs are dark red, the thorax nearly black. The upper surface of the head and thorax is opaque and strongly sculptured. The petiole, which is sharply and transversely rugose on its anterior and posterior surfaces, is narrow, decidedly convex behind, with rounded sides, and passes rather gradually into the spine.

This variety was taken only on New Providence Island at Nassau (Queen's Staircase and Fort Charlotte) and a neighboring key, Hog Island. Specimens of the very same form have been sent to me from Havana, Cuba, by Mr. C. F. Baker. Florida specimens of *insularis*, like those of the next variety to be described, have only faint traces of the transverse rugæ on the petiole.

In Nassau I found the variety *ruginodis* nesting under stones in small colonies of often not more than a dozen individuals. In the moat of old Fort Charlotte several isolated females were seen starting their colonies. In this phase the petiole is much broader and much more rugose than in the worker.

7. *Odontomachus hæmatodes insularis* Guérin var. *pallens* var. nov.

The worker of this form differs from the preceding in the somewhat larger size, though it is smaller than the typical *hæmatodes*, its pale color, and the characters of the petiole. The head, antennæ, thorax, and petiole are ferruginous red, the legs yellow. The petiole is broader from side to side, but narrower anteroposteriorly, flattened

or even concave behind, and passes above more abruptly into the long spine. It is shining, with only faint traces of rugæ on its anterior surface. In pilosity *pallens* resembles the var. *ruginodis*. The wings of the male are white, those of the female smoky.

This form was collected in several localities on Andros and New Providence Islands. It was common at Nicholl's Town, along Crawl Creek, on the keys along the course of the Southern Bight, and at Mangrove Key; on New Providence Island it occurred at Nassau, Fort Charlotte, Stanley (Menendez Sisal Plantation), Blue Hills, and West Bay. In several of these localities I took the males and winged females in the nests, May 18 to June 12. The nests are much larger than those of *ruginodis*, and often contain as many as 250 or 300 workers. They are flat and rather obscure mounds, one to two feet in diameter, built among the dead leaves in shady places, often about the roots of trees or shrubs. Sometimes the nests are found under stones or the trunks or leaves of palms. The workers of large colonies are very pugnacious and can sting severely. In one nest I found a very large *Pselaphid myrmecophile*, in another a peculiar *myrmecophilous Blattid*. The males, of which some colonies contained several, were sluggish and, like the males of *Pachycondyla harpax*, clung to the bottom of the stones covering the nest. I gained the impression that *pallens* is most frequently found in the 'pine yards,' that it is, in fact, one of the typical denizens of these forests. It occurs also in Cuba, whence I have received a number of specimens collected by Mr. C. F. Baker and Prof. C. H. Eigenmann.

#### Subfamily MYRMICINÆ.

#### 8. *Pseudomyrma flavidula* F. Smith.

*Worker.* — Length, 3.5–5 mm.

Head, including mandibles, nearly twice as long as broad, slightly narrower behind than in front. Mandibles with two prominent apical and several smaller basal teeth. Eyes large, in front of the middle of the head, and nearly half as long as its sides. Clypeus slightly convex, longitudinally carinate in the middle; median lobe short, with a nearly straight anterior border, bounded on either side by a small notch. First joint of antennal funiculus much longer than broad, as long as joints 2–4 together; joints 2–10 about as broad as long; terminal joint as long as the three preceding joints together. Thorax slender, dorsal surface seen in profile rather flat, with pronounced but short mesoepinotal impression. Pro- and mesothorax together as long as the epinotum, the basal surface of which is distinctly longer than the declivity; pronotum from above a little longer than broad, with rounded humeri and slightly but distinctly marginate sides; mesonotum transversely elliptical, meso-, and metathoracic

stigmata prominent. Epinotum narrowed behind, rounded in profile. Petiole with a short peduncle, seen from above gradually broadening posteriorly, fully three times as long as broad, distinctly marginate along the sides above, so that the segment is triangular in cross-section. In profile the node rises very gradually and evenly from a slightly concave or flattened surface, and falls more abruptly behind where the dorsal surface is somewhat concave. Ventral surface with a small tooth near its anterior edge. Postpetiole from above pyriform, more than twice as broad as the petiole and more than three times as broad behind as in front, slightly constricted at its insertion into the gaster. Gaster slender, gradually tapering posteriorly. Femora somewhat incrassated.

Body shining, covered with very fine punctures, which are most distinct on the head and thorax.

Pilosity consisting of a very few scattered erect yellow hairs; pubescence white, very delicate, sparse, and inconspicuous.

Reddish yellow. Mandibles and clypeus whitish; eyes, teeth of mandibles, a large spot on either side at the base of the first gastric segment, and a minute spot at each ocellus black.

*Female*. — Length, 5.5–7 mm.

Very closely resembling the worker. The sides of the head are nearly parallel and the posterior corners are more prominent. Wings colorless, with very pale yellowish veins and black stigma. There is a small black spot above the insertion of the fore wing, and the tips of the hind femora are more or less infuscated.

*Male*. — Length, 3.5–6.5 mm.

Head elliptical, excluding the mandibles, longer than broad, contracted and rounded behind; cheeks very short, eyes and ocelli large. Mandibles well developed, with denticulate blades. Clypeus slightly convex, with a small, angularly projecting median lobe. Antennæ long, first funicular joint distinctly longer than broad, second joint three times as long as broad, fully as long as the scape; joints 3–10 subequal, twice as long as broad, terminal  $1\frac{1}{2}$  times as long as the preceding joint. Prothorax small, with concave sides; mesonotum broad, without Mayrian furrows; epinotum rather low and rounded. Petiole long and slender, laterally compressed but not marginate, ventral surface with a small tooth in front; peduncle long and slender, passing gradually into the wider posterior portion and low node, the anterior surface of which is flat and rises very gradually, while the posterior slope is more abrupt and slightly concave behind. Postpetiole somewhat shorter than the petiole, but twice as broad behind; its upper surface is flattened, its ventral surface more convex. Gaster enlarging and bent downwards towards the tip, with slender penicilli and prominent rounded external genital appendages. Legs rather slender, femora somewhat thickened.

Body subopaque, more shining on the dorsal surface of the head and thorax, which are very finely reticulate-punctate.

Pilosity and pubescence white, the former shorter, the latter longer and more abundant than in the worker, so that the surface of the body and appendages has a hoary appearance.

Dark brown or blackish. Mandibles, anterior half of head above and below, genitalia, sutures of thorax, and posterior margins of all the abdominal segments,

pale yellow or whitish. Legs and antennæ pale yellow, the latter infuscated beyond the first joint of the funiculi, the former with the middle portions of the coxæ, tibiæ, and femora somewhat infuscated. Wings grayish hyaline, with brownish veins and black stigma. In many specimens the yellow posterior margin of the gastric segments runs forward into the middle of the infuscated portion, so that the latter becomes a bilobed spot.

Numerous specimens from many colonies collected on Andros Island (Fish Hawk Key, and many of the adjacent keys at the western end of the Southern Bight and Crawl Creek, at Mangrove Key and Dog Key); on New Providence Island at West Bay, Nassau, Hog Key, Blue Hills, Fort Charlotte, etc. In all of these localities the species was found nesting in the hollow culms of a tall grass (*Uniola paniculata* L.) and a sedge (*Cladium jamaicense* Crantz). The internodes of these plants were often packed full of the larvæ, pupæ, and callows. The adult workers were seen running about on the stems of the grasses and adjacent plants in search of small insects. The winged males and females were taken, May 23 to June 25. The females show considerable difference in size, some of them being veritable microgynes, no larger than the smaller workers.

#### 9. *Pseudomyrma elongata* Mayr.

*Worker.* — Length, 3–4.5 mm.

Head, including mandibles, nearly twice as long as broad, as broad in front as behind, sides slightly convex, with the large eyes near their middle. Mandibles with two large apical and several very small basal teeth. Clypeus slightly elevated and carinated, with a very short lobe, broadly rounded in front, slightly produced, and bounded on either side by a small notch. Antennæ short, first funicular joint distinctly longer than broad, remaining joints, excepting the last, distinctly broader than long, last joint nearly as long as the three preceding joints together. Thorax slender, but little broader in front than behind; in profile the dorsal surface is rather flat, with a short but distinct mesoepinotal impression. Pronotum longer than broad, with rounded humeri and flattened sides, hardly marginate. Mesonotum nearly circular. Epinotum about as long as the pro- and mesonotum together, somewhat narrower behind than in front, its basal surface flattened, not marginate, and nearly twice as long as the declivity into which it passes through a rounded angle. Petiole non-pedunculate, with a distinct tooth on its anterior ventral surface; seen from above it is a little more than twice as long as broad, broadest in the middle, triangular in cross-section, in profile with a rounded node, the anterior slope of which is more gradual and less convex than the posterior. Postpetiole pyriform, about as long as broad, and behind about twice as broad as the petiole, in profile equally convex dorsally and ventrally. Gaster broadest in the region of the second segment. Legs with slightly thickened femora.

Subopaque; surface of head and thorax densely and rather coarsely, legs and abdomen more finely, punctate; mandibles delicately striate-punctate.

Pile and pubescence white, the former very sparse and erect, the latter rather dense and conspicuous, giving the body a somewhat hoary appearance.

Dark brown or black; mandibles, antennal funiculi, clypeus, anterior margin of head, articulations of legs, tarsi, posterior edges of gastric segments, and tip of venter yellow or reddish yellow. In some specimens these lighter portions are more strongly infuscated.

*Female*. — Length, 5-6 mm.

Very similar to the worker. Head, excluding the mandibles, twice as long as broad, with parallel sides and rather prominent posterior corners. Sides of pronotum concave, leaving the edges above rather prominent and marginate. Epinotum rounded and somewhat convex. Tooth on lower surface of petiole very prominent. Wings grayish hyaline, with pale yellow veins and brown stigma. Mesonotum and scutellum smooth and shining.

*Male*. — Length, 4.5-5 mm.

Head, excluding the mandibles, longer than broad, rounded but not contracted behind. Cheeks very short. Eyes and ocelli large. Mandibles well developed, denticulate. Clypeus convex, angularly projecting forward in the middle. Antennae long, with very short scapes; first funicular joint a little longer than broad, second joint longer than the scape, and longer than any of the succeeding joints except the last; joints 3-10 subequal, nearly  $2\frac{1}{2}$  times as long as broad, last joint nearly three times as long as broad. Thorax slender, broadest through the insertions of the anterior wings; pronotum small; mesonotum smooth, without Mayrian furrows; epinotum rounded but not swollen. Petiole with a short peduncle in front; seen from above slender, three times as long as broad, broadest behind the middle, in profile with a very low, rounded node and a small acute tooth near the anterior edge of its ventral surface. Postpetiole pyriform, longer than broad, behind more than twice as broad as the petiole; in profile flattened above, more convex ventrally. Gaster similar in shape to that of the worker, its tip not dilated nor deflected; penicilli long and slender, genitalia small and embedded, only the rounded tips of the outer valves being visible. Legs long and slender.

Head and thorax somewhat more shining than in the worker, owing to the smaller and more scattered punctures.

Pilosity and pubescence as in the worker, the hairs being short, erect, and abundant on the thoracic dorsum and rather conspicuous on the mandibles.

Dark brown; mandibles, basal antennal joints, anterior portion of the head except the middle of the clypeus, tarsi, and articulations of the body and legs, yellow; teeth of mandibles, genital valves, and penicilli, black. Wings as in the female.

Numerous specimens from the following localities on Andros: Dog Key, at the extreme northern end of the island; Pot Key and Fish Hawk Key in the Southern Bight, and Crawl Creek in southwestern Andros; Mangrove Key and Little Golding Key on the eastern coast. On New Providence Island the species was common at Nassau, Blue Hills, and Hog Key. Though it is found nesting, like



the preceding species, in the culms of *Uniola* and *Cladium*, it seems to prefer the hollow twigs of bushes and trees like the gum mastic, sea grape, buttonwood, etc. The males and winged females were taken at the same time as those of the preceding species. Both species occur under very similar conditions on the Florida Keys and the adjacent mainland (Key Largo, Biscayne Bay, Card's Point, etc.). At Card's Point I found a number of colonies of *elongata* in Tillandsias. Near Blue Hills, N. P., I found a mixed colony of the two species in the same internode of a *Cladium* culm. A winged male, two winged females, and several workers of *flavidula* were living with several workers of *elongata*.

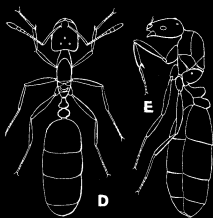
10. *Xenomyrmex stolli* Forel subsp. *floridanus* Emery var.  
*lucayanus* var. nov.

The worker of this variety differs in coloration both from the typical Guatemalan form and from the subsp. *floridanus*, while it agrees with the latter in its smaller size. It is pale yellow, with the thickened portions of the femora and the terminal antennal joint fuscous.

Two colonies of this ant were found on Andros Island; one in a Tillandsia on the north shore of the Southern Bight, the other in a hollow twig at Mangrove Key. The habits of the workers resemble those of *Monomorium floricola*, so far as could be ascertained by hasty observation in the field. According to Emery the types of *floridanus* were taken at Lake Worth, Florida, in a twig of the mastic tree (*Sideroxylon masticodendron*). The types of the species were taken with a species of *Camponotus* in a large oak-gall, and Forel concluded that the two forms were living in a state of xenobiosis. It is probable that this was accidental or merely a case of plesiobiosis, since the Floridian and Bahaman *Xenomyrmex* are known to live only in single colonies like most other Formicidæ.

11. *Monomorium floricola* Jerdon. — According to Emery this tropicopolitan species is, in all probability, a native of the East Indies. It seems to be rather rare on the eastern coast of Florida, where it has been taken by Mrs. Annie T. Slosson at Biscayne Bay and by myself on Key Largo. In the Bahamas it is very common, nesting by preference in the Tillandsias, but also in twigs and under the bark of living trees. I have specimens from the keys along the course of Crawl Creek, Western Andros, Mangrove Key, and from several places about Nassau, notably Fort Charlotte.

The males were found in nests on Key Largo, Florida, May 7, but were rare in the nests examined in the Bahamas. All the nests, however, contained numerous females, from five or six to thirty or more, and all of these females are ergatoid (Figs. D and E). At least I am



*Monomorium floricola* Jerdon, Ergatoid female.  
D, dorsal, E, lateral aspect.

unable to find anything in 108 specimens, which I have carefully examined, to indicate that they ever bear wings, although the thorax has the structure of the normal winged female in other species of *Monomorium*. As females of *floricola* from Barbados (Forel), Jamaica (Lyman Clark), and Havana, Cuba (C. F. Baker), all show exactly the same condition I am compelled to believe that it is perfectly normal. Though *M. floricola* is frequently mentioned in the literature to which I have access, nothing is said about the ergatoid

character of the female, which occurs also in *M. carbonarium* subsp. *ebeninum* (*vide infra*), and the form which I have described as *M. minutum* Mayr subsp. *ergatogyna* from Santa Catalina Island, Cal. H. H. Smith, however, in his field notes on *floricola* in Forel's paper on the ants of St. Vincent (p. 389), mentions the occurrence of winged females taken December 14. Can it be that the species is double brooded and produces winged females during the winter and ergatoid forms during the summer months?

While many species of *Monomorium* (*M. pharaonis*, the typical *M. minutum*, etc.) have normal winged females, some of the Oriental and African forms are said to have ergatoid females. Forel describes *M. andrei* of Oran as having both winged and ergatoid females (Bull. Soc. Vaud. Sc. Nat., Vol. XXX, No. 114, 1894, p. 20), and the same author mentions the occurrence of ergatoid females in the Indian *M. shurri* and *M. dichroum* (Rev. Suisse Zool., T. X, 1902, pp. 212, 213).

12. *Monomorium carbonarium* F. Smith subsp. *ebeninum* Forel.—Males, females, and workers from several nests found at Mangrove Key, Andros Island, and in and near Nassau, N. P. (Queen's Staircase and Hog Island). The males were taken May 31. In the Queen's

Staircase the nests were under stones; at Mangrove Key they were under stones and in the *Tillandsias*; on Hog Island they were found in the dry twigs of the buttonwood bushes. There were several females, sometimes as many as a dozen, in each nest, and, as in *M. floricola*, none of these showed any traces of ever having borne wings. The specimens are referred to *ebeninum* Forel on account of the decidedly angular epinotum in the worker. This subspecies has been recorded also from St. Thomas, Jamaica, and St. Vincent (Forel).

13. *Monomorium pharaonis* Linn. — This cosmopolitan house-ant could hardly be lacking in a seaport like Nassau. I found a few workers crossing the table-cloth in the cottage of the incomparable cook, Mrs. Becky McLaine.

14. *Monomorium salomonis* Linn. — Of this North African ant, which has not been recorded hitherto from the New World, I collected about forty specimens on the stone steps of a church in Nassau. The ants were leaving and returning to their nest in a crevice of the masonry. They were somewhat smaller and paler than a number of Algerian specimens sent me by my friend, Dr. Karl Escherich, but I am unable to detect any other differences.

15. *Cardiocondyla emeryi* Forel. — Workers of this interesting insect, which is known to occur in such diverse localities as Madagascar, Palestine, Madeira, and the West Indies, were found running over grassy and sandy soil in and near Nassau, N. P. It was common at Fort Charlotte, but the minute nests were not easily located. I failed to find the males and females. Certain species of *Cardiocondyla* are known to have ergatoid males, but this species has winged males, as Er. André and more recently Forel (Ann. Soc. Ent. Belg., T. XLVII, 1904, p. 422) have ascertained. It is possible, as the latter suggests, that the males of *Cardiocondyla* may be dimorphic, as in the case of *Ponera punctatissima* Roger and *P. eduardi* Forel. In these species Forel has found (*l. c.*, p. 421) both ergatoid and winged males.

16. *Solenopsis globularia* F. Smith. — A single colony taken May 14 at Nicholl's Town, Andros Island, in pure sand under a prostrate cocconut trunk on the beach.

17. *Solenopsis geminata* Fabr. — No specimens of this common tropicopolitan species could be found on Andros Island or on any

of the adjacent keys, but a black variety, allied to the Texan var. *xyloni* McCook, was very common on New Providence Island wherever there was soil or sand (West Bay, Nassau, Hog Island, Stanley, etc.). It constructs straggling moundlets with many entrances, garners seeds, but still retains its carnivorous instincts, stings fiercely—in short, exhibits all the traits which have gained for it the name of 'hormiga brava' in Cuba and of 'fire ant' in many other localities.

18. *Pheidole androsana* sp. nov.

*Soldier* (Fig. F). — Length, 5.25 mm.

Allied to *Ph. guilelmi-muelleri* Forel. Head large, longer than broad, sides parallel, posterior corners rounded, separated by a deep occipital notch, which is continued forward as a deep frontal groove. Mandibles convex, with two very blunt apical teeth. Clypeus very short and flat, with a prominent median carina and slightly excised anterior border. Behind the frontal area, which is triangular, as long as broad, and fused with the clypeus, there is a rather deep elliptical pit. Antennæ short, their scapes bent at the base and dilated towards their tips, which reach only a short distance behind the eyes. Eyes convex, situated between the anterior and middle third of the head. Frontal carinæ large, flattened, continued back obliquely on either side as a ridge, which borders a shallow groove for the reception of the antennal scape. This ridge and groove end rather abruptly a little behind the middle of the head, and a little more than half way from the frontal groove to the lateral surface of the head. Pronotum with large rounded tubercles on the sides, without a distinct transverse depression and fold in front of the short and concave mesonotum. Epinotum with a longitudinal groove, its basal surface straight in profile, distinctly longer than the slightly concave declivity. Epinotal spines directed upwards, very short, not longer than broad at the base, hardly a third as long as the basal surface of the epinotum, and twice as far apart at their bases as they are long. Petiole from above nearly twice as long as broad, broadest through its posterior third; in profile the anterior slope of the medially excised node is long and slightly concave, the posterior slope shorter and convex. Postpetiole not quite three times as broad as the petiole, produced in the middle on either side to form a rather acute conule, which is directed slightly backward. Legs rather long.

Mandibles smooth and shining, their discs with a few small punctures, and towards the edges of the blades with deeper parallel linear depressions. Clypeus in the middle smooth and shining, on the sides with coarse rugæ. Anterior four fifths of head with coarse longitudinal rugæ, which on the posterior fifth pass over into transverse rugæ of the same kind, so that the whole head is sculptured, but nevertheless somewhat shining. There is a faint tendency to anastomosis among the rugæ. Thorax somewhat shining like the head, tubercles glabrous; prothorax crossed transversely by coarse rugæ like those on the head; basal surface of epinotum rugose-punctate; declivity smooth but opaque; pleuræ with longitudinal and rather dense rugæ. Petiole and postpetiole nearly opaque, irregularly rugose-punctate. Gaster shining, the basal segment finely reticulate.

Hairs yellow, rather short and sparse, suberect on the antennal scapes and legs as well as on the upper surface of the body.

Deep reddish brown; mandibles red, broadly bordered with black; clypeus and anterior border of the head black, the former reddish in the middle; posterior edges of gastric segments yellowish; legs and antennæ light, clear yellow.

*Worker.* — Length, 2.5 mm.

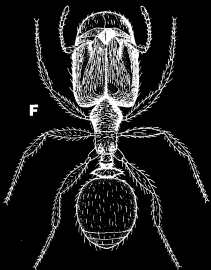
Head somewhat longer than broad, sides subparallel, posterior corners rounded. Eyes near the middle of the lateral surfaces. Mandibles, 6-7-toothed. Clypeus short, with very broadly rounded, entire and depressed anterior border, convex behind in front of the triangular frontal area, and with a faint longitudinal carina. Antennæ like those of the soldier, but straighter, and extending for about one third of their length beyond the posterior corners of the head. Thorax rather long and slender; promesonotal region evenly convex in profile, without lateral tubercles; epinotum and spines as in the soldier. Petiole fully three times as long as broad, hardly wider behind than in front, with subparallel sides; node not excised in the middle, in profile much lower and more rounded than in the soldier. Postpetiole campanulate, about as long as broad. Legs rather long and slender.

Mandibles, clypeus, and frontal area shining, the first with sparse, piligerous punctures. Head and thorax subopaque, the former reticulate, with a few irregular longitudinal rugæ, especially on the front and cheeks; vertex rather smooth. Thorax with coarse, transverse rugæ, becoming longitudinal on the pleuræ, especially in the region of the epinotum. Petiole, postpetiole, and gaster smooth and shining.

Hairs yellow, erect, abundant, and rather long, conspicuous on the legs and antennal scapes as well as on the upper surface of the body.

Dark brown; postpetiole, gaster, and antennæ somewhat paler; legs yellow.

Described from one soldier and two workers taken on Fish Hawk Key at the west end of the Southern Bight, Andros Island.



*Pheidole androsana* sp. nov. Soldier.

The soldier of this species is related to *Ph. guilelmi-muelleri*, but differs in having pronounced transverse rugæ on the occiput, and in lacking the transverse groove and ridge on the pronotum. The thorax of the new species is also longer and more slender, and the hairs are much less abundant than in Forel's species. The worker is much darker and has very different sculpture. *Ph. androsana* seems

also to be related to *Ph. brevicornis* Mayr of Brazil, and still more closely to *Ph. cubaensis* Mayr. From the last species it differs in having the mandibles 2-toothed at the tip, and in having prominent transverse instead of irregularly reticulate rugæ on the occiput.

19. *Pheidole fallax* Mayr var. *jelskii* Mayr. — Males, females, soldiers, and workers were taken June 22-25 on New Providence Island (Queen's Staircase, Fort Charlotte, etc.) and on an adjacent key, Hog Island. In the female the wings, which were wanting in the specimen described by Forel (Trans. Ent. Soc. London, 1893, p. 400), are grayish with yellow veins and stigma. This species is carnivorous. Its nests are flat moundlets, about four inches in diameter, built in sandy, grassy places. The soldiers have the rank odor so characteristic of the ants belonging to the genus *Eciton*.

20. *Pheidole megacephala* Fabr. — This common tropicopolitan species is recorded from the "Bahamas" by Emery (Zool. Jahrb., Abth. f. Syst., VIII, 1894, p. 294) without more specific locality. I did not find it on Andros or New Providence.

21. *Pheidole subarmata* Mayr var. *nassavensis* var. nov.

Several soldiers and workers, taken in and about Nassau, N. P. (Queen's Staircase, Fort Charlotte, etc.), from small nests in grassy places and occasionally under stones, differ in their paler coloration from Costa Rica specimens received from Prof. Emery. The soldier is yellow, with the mandibles and anterior half or two thirds of the head red, the pronotum and gaster somewhat infuscated. The hairs on the tibiæ are suberect and prominent. The worker is yellow, with the upper surface of the gaster slightly infuscated.

22. *Pheidole flavens* Roger. — Numerous soldiers, workers, males and two females, which I refer to the typical Cuban form of this variable species. The soldier has between the cephalic striæ none of the punctures which are faintly visible in the var. *vincentensis* Forel. The Bahaman specimens resemble the var. *thomensis* Emery from St. Thomas in cephalic sculpture, but their color is much paler, as I find by comparing them with a cotype received from Prof. Emery. The females agree with Roger's description of the type in coloration, the males with Forel's description of the male of *vincentensis*. My specimens were taken from several colonies found under stones and in and under old palmetto logs on Andros (Nicholl's Town and Crawl

Creek) and on New Providence (Nassau, Fort Charlotte, West Bay) Islands.

23. *Pheidole punctatissima* Mayr subsp. *annectens* subsp. nov.

*Soldier*. — Similar in color to *Ph. anastasioi* Emery of Costa Rica, but differing in the shape of the postpetiole, which is broader and has more acute lateral conules in the Bahaman form, as I find by comparing it with a type of *anastasioi* received from Prof. Emery. In *annectens* the conules are in the middle and not in front of the middle of the segment, as in the subsp. *insulana* described below. Head, thorax, and pedicel reddish yellow; mandibular teeth, clypeus, and anterior margin of head black; antennae and legs yellow. Hairs on the body long and abundant, suberect; rather short and inconspicuous on the legs and antennae.

*Worker*. — Much darker in color than the worker of *anastasioi*; head and thorax dark brown, gaster paler; antennae and legs yellow.

*Female* (decalated). — Postclypeal portion of head opaque, with the longitudinal rugae extending back nearly to the occiput. Pronotum very finely rugose and subopaque, the rugae being somewhat concentric about a point in the middle line near the anterior edge. Paraptera subopaque, finely striated. Scutellum smooth and shining, sparsely and coarsely punctate, transversely rugose behind. Epinotum opaque on the sides and very coarsely and longitudinally rugose; between the spines densely punctate. Spines robust, acute, about as long as they are broad at the base. Node of petiole high, compressed, and transverse; produced on either side in the middle to form a rather blunt conule. Its upper surface is transversely rugose. Whole of first gastric and posterior edges of succeeding segments opaque, very finely punctate. Head, thorax, and petiole ferruginous red; gaster dark brown, with the anterior and posterior corners of the first segment and the posterior edges of all the segments reddish yellow; antennae and legs pale yellow. Hairs covering the body and legs moderately long and abundant, suberect.

Several small colonies of this subspecies were found under stones and palmetto logs at Mangrove Key on the eastern coast of Andros Island.

24. *Pheidole punctatissima* Mayr subsp. *insulana* subsp. nov.

*Soldier*. — Agrees with Mayr's description of *Ph. punctatissima* except in coloration and the shape of the postpetiole. Body dark brown; mandibles red, with black teeth; clypeus, anterior third of head, antennae, legs, and petiole yellow. Extreme posterior portion of head smooth and shining. Epinotal spines directed upwards and very slightly backwards. Postpetiole on either side produced into an acute conule, which is distinctly in front of the middle of the segment. According to Mayr's description, the postpetiole of *punctatissima* has more obtuse lateral angles. Hairs on head, gaster, and legs long, suberect.

*Worker*. — Resembles the worker of the preceding species in color.

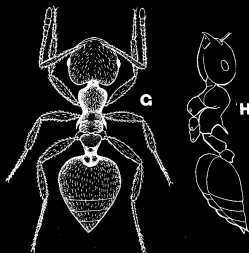
Workers and soldiers from several colonies were found in rotten palmetto boles or under stones in vegetable mould on the keys about the west end of the Southern Bight, Andros Island, and near the Blue Hills, New Providence Island.

25. *Cremastogaster ashmeadi* Mayr. — Two workers, nearly black in color, with dark red antennal funiculi and tarsi, were taken on a key in Crawl Creek, western Andros. They may represent a distinct variety, but this cannot be determined without more material. The typical form is common on the eastern coast of Florida (Miami and Card's Point) and the adjacent keys (Key Largo, etc.), where it may be found attending aphides and Coccidæ on the mangroves and other trees.

26. *Cremastogaster lucayana* sp. nov.

Worker (Figs. G and H). — Length, 2.7–4 mm.

Allied to *C. lineolata* Say. Antennal scape surpassing by fully twice its greatest diameter the posterior angle of the head; club 3-jointed. Clypeus distinctly flattened in front. Frontal area rather indistinct, triangular, narrower than long. At the posterior end of the slender frontal groove there is a very distinct dimple or impression. Thorax strongly constricted in the mesoepinotal region. Epinotal spines straight or but very slightly recurved at their tips, strongly diverging outward, upward, and backward, shorter than the distance between their bases. Petiole from above about as long as broad, in profile distinctly narrower dorsoventrally in front than behind. Postpetiole narrower than the petiole, with a deep median groove. Gaster broad, triangular, flattened above.



*Cremastogaster lucayana* sp. nov. Worker; G, dorsal; H, lateral aspect.

Mandibles, clypeus, cheeks, and front finely but sharply and longitudinally striated, opaque; vertex somewhat smoother and more shining, with distinct transverse rugæ in the occipital region. Thorax opaque; pro- and mesonotum and base of epinotum very coarsely and vermiculately

rugose, the rugæ being more longitudinal on the base of the epinotum and on the pleuræ. Epinotal declivity, petiole, postpetiole, and gaster smooth and shining.



Hairs whitish, rather inconspicuous, mostly appressed on the body and legs, suberect on the antennal scapes, longer and more prominent on the clypeus, front and upper surfaces of the thorax and gaster.

Head and thorax piceous brown, posterior portion of head, antennæ, and legs darker; gaster black; in some specimens the basal portions of the gastric segments are more brownish or piceous.

*Female* (deâlated). — Length, 6.8 mm.

Head sculptured like that of the worker, except the posterior portion, which is sparsely punctate. Upper portion of the thorax subopaque, more sparsely punctate than the back of the head. Meso- and metapleuræ sharply and longitudinally rugose. Pilosity like that of the worker. Head, thorax, petiole, postpetiole, and legs dark reddish brown, mesonotum with a yellowish U-shaped blotch on its disc; scutellum and gaster black.

Many workers and a single female, collected on Fish Hawk Key and other keys along the course of the Southern Bight in western Andros, and near the Blue Hills in New Providence. In all of these localities the species was common in grass and sedge culms and in the *Tillandsias* growing on the bushes along the edges of the 'swashes.'

*C. lucayana* is closely allied to *C. sanguinea* Roger of Cuba in having the petiole lower in front than behind. It resembles *C. vermiculata* Emery of California in sculpturing, but has strongly diverging epinotal spines and longer antennal scapes. Its odor is quite unlike that of *C. lineolata*, of which it can hardly be regarded as a mere subspecies.

27. *Cremastogaster lucayana* subsp. *etiolata* subsp. nov.

*Worker*. — Length 3-4 mm.

Differing from the preceding form in sculpture, pilosity, and coloration. Mandibles and cheeks indistinctly striate, the former sparsely punctate. Body smooth and shining, especially the posterior portion of the head and the gaster. Thorax subopaque; pronotum rather coarsely and longitudinally rugose punctate in front, smoother behind; basal surface of epinotum with numerous longitudinal rugæ, declivity smooth and shining.

Hairs white, rather sparse, mostly appressed, longer and suberect on the clypeus, mandibles, front, upper portions of thorax, and gaster. The hairs on the antennal scapes and legs are appressed and inconspicuous.

Yellow; in most specimens the gaster is black with the exception of the posterior border of the first segment; in others all except the two or three terminal segments are yellow, with a black band across their posterior edge. Mandibles reddish with black teeth.

*Female*. — Length 7 mm.

Resembling the worker in color and pilosity. Head finely and sparsely punctate. Pronotum very smooth and shining; epinotal spines short, conical, far apart, and directed backward. Body, legs, and antennæ reddish yellow;

mandibles and antennal funiculi darker. Thorax and epinotum clouded with brown. Each gastric segment is crossed near its posterior edge by a dark band, which is narrow in the middle and as broad as the segment on either side where it surrounds a deep yellow spot. Venter yellow in the middle. Wings whitish hyaline, with brownish yellow veins and stigma.

Described from one female and many workers taken May 18 and 23 on the keys along the northern shore of the Southern Bight, Andros Island. One of the nests was in a dead branch of a gum mastic tree, the others in Tillandsias on mangroves at the edge of the 'swashes.'

28. *Cremastogaster victima* F. Smith var. *steinheili* Forel.—Numerous colonies containing males and winged females were found nesting in hollow twigs, and especially in the Tillandsias growing on the mangroves and other shrubs in the 'swashes' of Andros. These colonies were particularly abundant on Big Wood Key (May 16), Pot Key, and other keys along the course of the Southern Bight (May 18 and 19). A few specimens were also taken at West Bay on New Providence Island. All the specimens collected represent a form assignable to the var. *steinheili*, although the females are considerably larger (6–7 mm.) than a female type (4.6 mm.) of *steinheili* from Kingston, Jamaica (Forel), in my collection.



*Macromischa pastinifera* Emery var. *opacipes* var. nov. Worker.

29. *Macromischa pastinifera* Emery var. *opacipes* var. nov.

Two workers (Fig. I), found running over the ground under some dead palmetto leaves on a key in Crawl Creek, western Andros, agree with Emery's description and figure of the type from the "Bahama Islands," except in having the legs entirely opaque and finely punctate, instead of shining. On this account the specimens may be regarded as representing a distinct variety.

30. *Macromischa lucayensis* Forel. — This species, described by Forel from a single winged female from the "Bahama Islands," is

apparently very closely related to the preceding species and to *M. androsana* (*vide infra*), but the femora are not incrassated.

### 31. *Macromischa androsana* sp. nov.

*Worker* (Fig. K). — Length 1.9–2 mm.

Head, excluding the mandibles, somewhat longer than broad, with broadly rounded posterior angles and straight occipital border. Eyes in the middle of the sides of the head. Mandibles 5-toothed. Clypeus with straight, hardly excised anterior border. Antennæ 12-jointed, scape reaching to the posterior corner of the head; funiculus with a distinct 3-jointed club, joints 2–7 broader than long; 8th joint as broad as long; terminal joint longer than the two preceding subequal joints of the club. Thorax in profile with rounded dorsum, without a mesoepinotal constriction, twice as long as high; seen from above it is a little wider in front than behind, its sides are sub-parallel; including the neck it is more than twice as long as broad. Epinotal spines long, directed backward, curved downward and outward, more than twice as long as the distance between their bases. Petiole with a long peduncle, toothed below in front; node very high, arising abruptly from the peduncle, so that its anterior surface runs obliquely downward and backward from the summit, which is rounded and passes over rapidly into the convex posterior declivity. Seen from above the node has a semicircular anterior and nearly straight posterior outline. Postpetiole twice as broad as the petiolar node and twice as broad as long, rounded in front, and not constricted at its union with the gaster; in profile campanulate and very convex dorsally. First gastric segment with a straight anterior border. Sting very long and powerful. Legs, especially the hind pair, very long; tibiae, and especially the femora, incrassated.

Body and appendages opaque with the exception of the gaster, which is very glabrous, and the frontal area and upper surface of the post-petiole, which are slightly shining. Antennæ and legs subopaque. Mandibles finely and densely striated and rather coarsely punctate. Clypeus and frontal area longitudinally rugose. Head densely and evenly punctate, with more scattered, somewhat larger and shallower punctures interrupting the uniformity of the surface. Thorax, petiole, and postpetiole finely and uniformly punctate, the pronotum and pleuræ also with some irregular and not very prominent rugæ. Legs and antennal scapes very finely and evenly punctate or granular.

Hairs snow-white, obtuse, and erect on the upper surface of the head, thorax, pedicel, and gaster; minute and appressed on the antennæ and legs.

Black, thorax and petiole yellowish red; mandibles, anterior border of clypeus, frontal carinæ, antennæ, and legs dark brown. In some specimens the femora are black. Tarsi and sting more yellowish.

[June, 1905.]



*Macromischa androsana* sp. nov. Worker.

Described from nine workers found in two localities on Crawl Creek, Andros Island. The ants were running about under dead leaves that had fallen from the palmettos. I failed to locate their nests.

*M. androsana* is related to *M. pastinifera*, but is readily distinguished by its much shorter antennæ. The antennal scapes of *pastinifera* extend far beyond the posterior corners of the head, all the joints of the funiculus are decidedly longer than broad, the club is less distinct, and its last joint is not longer than the two preceding joints. The clypeus is distinctly notched, the petiolar node is higher, more concave in front, and the hind legs are longer. The head is red like the thorax and not black, the thorax is more rounded in profile, etc. *M. lucayensis* Forel can hardly be the female of *androsana*, on account of its red head and non-incrassated femora.

### 32. *Macromischa splendens* sp. nov.

Worker (Pl. VII, Fig. 9). — Length 3–3.5 mm.

Head, excluding the mandibles, distinctly longer than broad, sides subparallel, posterior corners broadly rounded, posterior border straight. Eyes prominent, in the middle of the sides of the head. Mandibles 5-toothed. Anterior border of clypeus very faintly excised in the middle. Antennæ 12-jointed; scape reaching to the posterior corner of the head; funiculus with a distinct 3-jointed club, the last joint of which is longer than the two preceding subequal joints; joints 2–8 somewhat broader than long. Thorax without a mesoepinotal suture or constriction, but slightly arched above, its dorsal surface somewhat flattened, in profile fully three times as long as high; seen from above it is a little wider in front than behind, with rounded humeral angles and subparallel sides. Epinotal spines shorter than the concave declivity of the epinotum, about twice as long as the distance between their bases, directed outward, upward, and backward, their tips slightly curved downward. Petiole with a slender peduncle, bluntly toothed on its ventral surface; node abrupt and prominent, evenly rounded in profile. Postpetiole campanulate, half again as broad as the petiole. Gaster small, with a very long and powerful sting. Legs long, especially the hind pair, with much thickened femora and tibiae. Hind metatarsus as long as the tibia.

Body shining; petiole, postpetiole, gaster, and legs shining. Mandibles very coarsely rugose-punctate. Clypeus and whole head longitudinally rugose, the rugæ of the latter being somewhat vermiculate. Thoracic dorsum crossed by a regular series of deep, curved furrows, which are continued back even over the declivity of the epinotum and obliquely forward and downward on the pleuræ, so that there is no interruption in the sculpture of the thorax except on the neck, which is much more finely and transversely reticulate-rugose. Legs finely reticulate, covered with very coarse piligerous punctures.

Body and appendages clothed throughout with abundant, erect, long, slender, silvery white hairs.

Head and thorax deep metallic green, passing on the cheeks, pleuræ, and epinotum into metallic violet. Mandibles, clypeus, frontal carinæ, neck, terminal tarsal joints, sting, and anterior end of petiolar peduncle dull orange; remainder of petiole, postpetiole, gaster and legs deep black; coxæ, trochanters, and extreme bases of femora honey-yellow.

*Female* (dealtated.) — Length 4-4.5 mm.

Resembling the worker. The epinotal spines are much shorter, more rapidly tapering, and further apart at their bases than long. The pronotum is transversely and irregularly rugose, the mesonotum and paraptera are evenly and longitudinally rugose; the scutellum has three systems of rugæ, one oblique on either side and meeting in the middle, and one consisting of a few transverse rugæ in the middle near the posterior edge of the sclerite. Epinotum transversely furrowed like the whole thorax of the worker. On the pleuræ the rugæ are longitudinal. The legs have the same structure as in the worker. In color the following differences can be detected: A broad band across the middle of the head is metallic bronze, or golden, and the petiole and postpetiole have a slightly metallic violet tinge. The venter and bases of the gastric segments, except the first, are yellowish brown.

*Male.* — Length 3-3.5 mm.

Head, excluding the mandibles, longer than broad, much broader behind than in front. Cheeks long, subparallel. Eyes prominent, in the middle of the sides of the head. Posterior corners of the head rounded, posterior border convex. Mandibles large, 6-toothed. Clypeus convex, faintly emarginate in the middle. Antennæ 13-jointed, very slender; scape nearly as long as the funiculus, and extending about one third its length beyond the posterior corner of the head; funiculus with an indistinct 4-jointed club, the last joint of which is nearly as long as the three preceding joints; remaining funicular joints somewhat longer than broad, first joint conspicuously thickened. Thorax with very deep Mayrian furrows and a very deep promesonotal constriction, so that the front of the mesonotum rises abruptly. Scutellum with a prominent median keel. Epinotum very small, distinctly angular in profile, but quite unarmed. Petiole very long and slender, the peduncle, which has no tooth on its ventral surface, passing in profile gradually into the very low node; in dorsal view the petiole widens gradually toward its posterior end, which is about one fourth as broad as the length of the segment. Postpetiole about half again as broad as the petiole, campanulate, as long as broad. Gaster rather short, compressed dorsoventrally, genitalia prominent and exerted in some of the specimens. Legs long and slender, femora and tibiæ hardly incrassated. Wings with a very prominent stigma, with a single cubital and no discal cell.

Mandibles and clypeus coarsely punctate, the latter also coarsely and longitudinally rugose. Head and thorax subopaque, densely reticulate-rugose, the rugæ being longitudinal on the head, mesonotum, and scutellum, and transverse on the pronotum; mesopleuræ rather smooth and shining. Petiole, postpetiole, gaster, and legs glabrous.

Hairs white and erect on the body, antennæ, and legs, but less conspicuous than in the worker.

Black, the head and thorax with an indistinct metallic greenish lustre in some specimens. Mandibles, clypeus, cheeks, front, and sides of pronotum, wing-insertions, metapleuræ, coxæ, and trochanters dull orange or brownish. Genitalia and terminal tarsal joints pale yellow. Wings whitish hyaline; veins colorless, stigma yellowish.

Four colonies of this superb species were found, June 25, nesting in hollow culms of *Cladium jamaicense*, in marshy ground along the road that leads from Grant's Town to the Blue Hills near Nassau, N. P. There were only 50-75 ants in a colony. They were timid, and moved about rather slowly, with the gaster bent forward between the long hind legs. The nest entrance was a small round hole in one of the internodes of the sedge culm, which was filled with the translucent larvæ and pupæ.

*M. splendens* belongs to the group of beautiful Cuban species (*M. purpurata*, *porphyritis*, *squamifera*, *versicolor*, and *iris*), described many years ago by Roger, but not since seen by myrmecologists. The new species seems to be most closely related to *M. squamifera*, but, according to Roger's description, this species has the head rugose only in front of the eyes, the postpetiole is not broader than the petiole, the node of the latter is strongly compressed anteroposteriorly, and the hind metatarsus is shorter than the tibia.

33. *Rogeria curvipubens* Emery. — A couple of workers found running on the rocky soil near Mangrove Key, Andros, agree very closely with Emery's description of this species.

34. *Tetramorium guineense* Fabr. — This tropicopolitan species seems to be a rather recent importation into the Bahamas. I failed to find it on New Providence, and on Andros only a few specimens of it were seen in two localities: on Fish Hawk Key on the western, and Mangrove Key on the eastern coast of the island.

35. *Tetramorium lucayanum* sp. nov.

*Worker* (Fig. L). — Length 2.25-2.5 mm.

Head quadrangular, excluding the mandibles somewhat longer than broad. Mandibles broad, 5-toothed. Anterior border of clypeus transverse, without teeth. Each frontal carina is continued back as a prominent ruga which, especially behind, bounds a distinct elongate elliptical scrobe for the reception of the antennal scape. Antennæ 12-jointed, scape not reaching the posterior corner of the head. Thorax seen from above with prominent humeral angles, in profile with faint but distinct mesoepinotal depression, especially in the pleural region. Epinotal spines rather slender, straight, directed outward, upward, and backward, somewhat longer than the distance between their

bases. Episterna produced into prominent spines, fully half as long as those on the epinotum, pointed and curved upward at the tips. Petiole distinctly pedunculate, the node in profile quadrangular, rising abruptly in front, with a horizontal dorsal surface and steep posterior declivity; seen from above it is oval, somewhat narrower in front than behind, and about  $1\frac{1}{2}$  times as long as broad. Postpetiole subglobular, about as long as broad, distinctly broader than the petiole. Gaster rather small. Legs robust, with thickened, fusiform femora.

Body shining throughout. Mandibles rather delicately striato-punctate. Clypeus with several longitudinal rugæ. Head and thorax traversed by sharp longitudinal rugæ which are not very close together and have a tendency to become reticulate, especially on the thorax; interrugal spaces with shallow punctures which are much finer and denser on the antennal scrobes. Node of petiole with very coarse reticulate rugæ, several of which are conspicuously transverse. Postpetiole smooth except for a few longitudinal wrinkles on the sides. Gaster glabrous.

Hairs pale yellowish, sparse, long, and erect on the body, much shorter, more numerous, and appressed on the antennæ and legs.

Black; mandibles, antennæ, legs, and tip of gaster reddish yellow; neck, peduncle of petiole, scapes, and femora dark brown.

Described from two workers found running on the ground in the Queen's Staircase at Nassau, N. P.

This species seems to be sufficiently distinct from other American species of *Tetramorium*, like *T. balzani* Emery from Paraguay, and *T. reitteri* Mayr of Brazil. In sculpture it resembles the former species, to judge from Emery's description.

36. *Tetramorium simillimum* Nylander. — This tropicopolitan species is common in certain localities near settlements both on Andros and New Providence. At Nicholl's Town, on the eastern coast of the former island, I found it in and under rotting cocoanut boles that had been prostrated some years ago by a hurricane. These nests contained many males and winged females (May 14). On New Providence the species was common under stones in the Queen's Staircase in Nassau, in the Menendez Sisal Plantation near Stanley, and in the dwindling 'pine yards' near the Blue Hills.



*Tetramorium lucayanum* sp. nov. Worker.

37. *Cryptocerus varians* F. Smith.

*Soldier* (Pl. VII, Figs. 1, 2 and 3). — Length 5–6 mm.

Head surmounted by an elliptical dish-shaped disk,  $1\frac{1}{2}$  times as long as broad, with a median anterior fissure extending back a little over  $\frac{1}{2}$  of its length. The floor of the disk is raised in the middle just behind the fissure and again less prominently farther back; the edge is nearly or quite smooth in front but distinctly and somewhat irregularly crenellated behind. The disk completely conceals the head with the exception of its crenated and somewhat upturned posterior corners, between which the occiput is concave. Thorax nearly  $1\frac{1}{2}$  times as long as broad and nearly  $1\frac{1}{2}$  times as broad in front as behind. Pronotum with prominent and rather acute angles, and a high ridge, interrupted in the middle, across its posterior portion. Sides of epinotum with two broad, indistinct teeth in front of the prominent posterior angle. Petiole and postpetiole of equal breadth, or the latter but very little broader than the former, each produced laterally into a rather blunt or even slightly truncated tooth, that of the petiole being nearer the middle of the segment and somewhat smaller than the postpetiolar tooth. Gaster elongate elliptical,  $1\frac{1}{2}$  times as long as broad, anteriorly marginate on the sides, with a deep, curved excision for the accommodation of the pedicel. Legs short and robust.

Subopaque, upper surface of cephalic disk shining, especially in front. Head, thorax, and petiole covered with circular foveolæ which are larger and more scattered on the head, especially on its anterior portion, much denser and somewhat smaller on the thorax and pedicel. Sides and declivity of epinotum finely and evenly granular. On the petiole and postpetiole the foveolæ are so close together that these segments appear coarsely reticulate-rugose. Gaster finely and evenly granular, with scattered punctures which are larger and denser and more like the thoracic foveolæ on the base and almost absent at the posterior end of the enlarged first segment. Legs very finely and evenly granular and covered with small shallow punctures.

Hairs very short, silvery white, scale-like, appressed, each in the centre of one of the foveolæ. Cephalic disk fringed with somewhat longer, erect, clavate hairs, and there are similar hairs on the tip of the venter.

Black or brownish black; gaster, legs, and antennæ deep reddish brown. Young callow specimens are yellow, somewhat older ones rich ferruginous red throughout.

*Worker* (Pl. VII, Fig. 4). — Length 3–4.25 mm.

Head a little narrower in front than behind, its posterior border nearly straight, with blunt posterior angles; eye in a deep rounded excision just in front of the posterior corner. Anterior corners rounded, in front separated by a deeply rounded median excision which permits the small mandibles to be seen from above. Thorax more than  $1\frac{1}{2}$  times as long as broad, somewhat broader in front than behind, sharply marginate on either side. Promesonotal suture obsolete, mesoepinotal suture straight; the anterior corners of the mesonotum marked by a distinct tooth. Pronotum with distinct humeral angles and the epinotum with a distinct tooth on the side near its base. Petiole and postpetiole of equal breadth, each with a prominent tooth on either side, obliquely truncated at the tip. Gaster elliptical, flattened, roundly excised in the middle



anteriorly, with a much flattened margin along its basal third. Legs short and robust.

Whole body subopaque, finely granular, covered with rather dense foveolæ, which are smaller and less circular than in the soldier. Sculpture of gaster and legs as in the soldier.

Pilosity like that of the soldier, except that there are no clavate hairs on the head.

Deep ferruginous brown, almost black; gaster, cephalic lobes, legs, and antennæ reddish. Callow specimens are much paler, even yellow when first hatched.

*Female* (Pl. VII, Fig. 5). — Length 6.5–7.5 mm.

Resembling the soldier. The cephalic disk, though of the same shape, is distinctly smaller and has a shorter anterior incision; it is shallower and has only one somewhat larger convexity in its floor. The edge of the disk is irregularly crenellated throughout. Humeral and epinotal angles of the thorax short, stout, and acute. Petiole and postpetiole subequal,  $1\frac{1}{2}$  times as broad as long, slightly angular in front, but rounded on the sides. Gaster oblong, about three times as long as broad, its sides parallel, its anterior border broadly and roundly excised; there is no compressed lateral margin. Legs short. Wings long, reaching fully one mm. beyond the tip of the gaster.

Sculpture like that of the soldier, except that the foveolæ on the cephalic disk are even larger and more uniformly distributed, as large, in fact, as the ocelli. The disk is subopaque like the remainder of the body.

Pilosity like that of the soldier, but there are almost no hairs on the foveolæ of the head, and those on the thorax and gaster are inconspicuous.

Color like that of the soldier. Wings decidedly infuscated, veins and stigma dark brown.

*Male* (Pl. VII, Fig. 6). — Length 4–4.5 mm.

Head broader behind than in front, decidedly broader than long; cheeks concave, eyes and ocelli very prominent; mandibles well developed, dentate; clypeus short and broad, its anterior border straight. Frontal area large, triangular, impressed. Frontal groove pronounced, extending from the frontal area to the anterior ocellus. Antennæ long, 13-jointed, joints 3–13 subequal in length, but increasing very gradually in thickness towards the tip. First joint thick, hardly half the length of the third, second joint very small, not incrassated, not longer than broad. Thorax with deep Mayrian furrows. Scutellum flattened. Epinotum somewhat rounded in profile, its basal and declivous surfaces of about equal length. Petiole and postpetiole subequal, seen from above about as long as broad, angular in front, with straight sides slightly converging behind. In profile the petiole is somewhat more convex than the postpetiole. Gaster slender, first segment occupying a little over half its length, the remaining segments subequal. Genitalia exerted. Legs rather short.

Mandibles, head, thorax, and pedicel opaque, finely granular, or punctate. Occipital portion of the head sparsely foveolate and somewhat reticulate-rugose. Dorsal and pleural surfaces of thorax finely and obscurely longitudinally striated, most clearly on the scutellum, metanotum, and basal epinotal surfaces. Gaster and legs smooth and shining.

Hairs yellow, longest and suberect on the head, thorax, and gaster; very short and appressed on the antennæ and legs.

Head, thorax, and pedicel black; base of mandibles, antennæ, coxæ, and gaster dark brown. Tips of mandibles, palpi, legs, posterior edges of gastric segments, and genitalia pale yellow. Wings whitish hyaline with yellow veins and conspicuous brown stigma.

This species was found on Andros, but not on New Providence. It was rather common on the keys along the course of the Southern Bight (Pot Key, Fish Hawk Key, etc.) and Crawl Creek, at Mangrove Key, and Little Golding Key. It lives in hollow twigs, in the culms of *Uniola* and *Cladium*, and in *Tillandsias*. In twigs and culms the nest entrance is elliptical, with its long axis parallel with the long axis of the stem, and just the size of the head of the soldier. The very same species was found at Card's Point, Florida, nesting in *Tillandsias* of the same species as those found on Andros. In habits *C. varians* thus closely resembles *C. aztecus* Forel and *C. wheeleri* Forel, which I have observed in Mexico. The winged females and males were taken at Card's Point, May 30, and on Little Golding Key, June 19.

*C. varians* is closely related to *C. pallens* (= *C. discocephalus* F. Smith and *C. araneolus* F. Smith), as Emery has surmised (Bull. Soc. Ent. Ital., An. 28, 1896, p. 76), and may even be regarded as a subspecies of that form. The petiole and postpetiole of the worker and soldier of *variens*, however, are narrower and of a different shape, and the thorax of the soldier is not so broad behind. I have figured all four phases of this species, as the soldier, male, and female have not been seen hitherto.

### 38. *Strumigenys lanuginosa* sp. nov.

*Worker*. — Length 2.25 mm.

Head much narrowed in front, broadened behind, with deeply and roundly excised posterior margin and rounded posterior angles. Eyes in the middle of the sides of the head where there are also well-developed scrobes for the accommodation of the antennal scapes. Mandibles straight, linear, with parallel inner and outer borders, a little over half as long as the head, with two prominent teeth bent in at right angles at the tip, and a short but distinct tooth on the inner border just behind the tip. Clypeus triangular, equilateral, its posterior border straight, not extending over the base of the mandibles. Antennal scape about half as long as the head exclusive of the mandibles, slender at the base, but rapidly enlarging towards the tip, where it again narrows. Terminal funicular joint as long as the four basal joints taken together; first and fourth joints subequal, each somewhat longer than the second and third joints taken together. Thorax with distinct mesoepinotal constriction. Pro-

notum flattened, with sharp humeral angles, distinctly marginate in front and along the sides, and longitudinally carinate on the middle of its posterior half. Epinotum armed with two acute spines which are somewhat longer than broad at their bases, further apart than long, directed backward and slightly outward, and produced below as very small membranous laminae. Both the petiole and postpetiole with prominent spongiform appendages on their posterior and inferior surfaces; postpetiole half again as broad as the petiole; nodes of both semi-circular from above, straight in front and convex behind; in profile the anterior slope of the petiolar node is gradual and concave. First gastric segment with spongiform appendages on its anterior and inferior border.

Mandibles smooth, subopaque. Head, thorax, petiole, and postpetiole opaque, densely punctate; thoracic dorsum somewhat rugulose. Gaster smooth and shining, first segment above opaque, with very fine longitudinal striae.

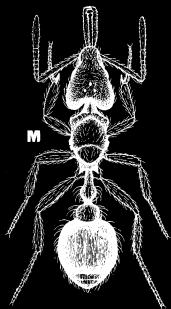
Body and appendages covered with long, delicate, flexuous, yellowish hairs, which are largely reclinate or appressed on the head, thorax, and legs, but sub-erect, very conspicuous, and abundant on the gaster. There are no club-shaped or obtuse hairs, and the curved hairs on the anterior border of the antennal scapes are inconspicuous.

Ferruginous brown; petiole, postpetiole, and gaster darker; mandibles, antennae, and legs more yellow. Mandibular teeth black.

*Female* (deälated). (Fig. M). — Length 2.5–2.8 mm.

Resembling the worker very closely, except in the structure of the thorax. The basal surface of the epinotum is long, oblique, and distinctly concave. The inferior membranous laminae of the epinotal spines is more extensive. The spongiform appendages on the petiole, postpetiole, and basal gastric segment are very conspicuous. Color and pilosity as in the worker; alar insertions black.

Described from a single worker and five females taken in and about Nassau (in the Queen's Staircase and the moat around Fort Charlotte). The females were in the act of founding their colonies. Each was found under a stone covering a nest of *Tetramorium similinum*, *Pheidole flavens*, or *Monomorium ebeninum*. This fact suggests that the new species, like several other species of the genus *Strumigenys*, habitually forms compound nests with other ants.



*Strumigenys lanuginosa* sp. nov. Female (deälated).

*S. lanuginosa* is closely related to *S. unidentata* Mayr, *unispinulosa* Emery, *imitator* F. Smith, *louisianæ* Roger, and *fusca* Emery. It differs from the first in having perfectly straight mandibles, from the second in having the head much narrower in front, spongiform appendages on the petiole, no clavate or squamiform hairs, etc.; from the third in having a distinct tooth on the inner border of the mandibles just behind the two apical teeth; from the fourth in having the pre-apical mandibular spine shorter, and in lacking the club-shaped and scale-like hairs on the body; from the last in its smaller size, in having a shorter preapical spine, the head narrower in front, spongiform appendages on the petiole, etc.

39. *Cyphomyrmex rimosus* Spinola subsp. *minutus* Mayr (Figs. N and O). — No form of *C. rimosus* was found on Andros Island, but numerous workers from several nests collected near Nassau, N. P., (Fort Charlotte, Menendez Sisal Plantation, and Blue Hills), agree with Emery's description of the subsp. *minutus* (Bull. Soc. Ent. Ital., XXVIII, 1896, pp. 89, 90). The nests were under stones, where the ants were guarding their fungus gardens on caterpillar excrement. The fungus consisted of small translucent, pear-shaped, yellow bodies, about .5 mm. in diameter. They were of exactly the same size and appearance as those which I first saw in the fungus gardens of the subsp. *dentatus* Forel in Mexico. More recently I have found these



*Cyphomyrmex rimosus* Spinola subsp. *minutus* Mayr. Worker. N, body in profile; O, head from the front.

gardens and fungi in the nests of a dark variety of *rimosus* at New Braunfels, Texas, and in the nests of another variety on Key Largo, Florida. There can be no doubt that previous authors have been mistaken in asserting that this species does not cultivate fungi like all the other known species of Attii. The fungi have simply been overlooked because they are not in the form of a white mycelium. I have kept the Texan variety in artificial nests, and have seen the workers carefully raising and eagerly eating the bodies which must

belong to some hitherto undescribed fungus very different from the *Rhizites gongylophora* Moeller.

40. *Atta* (*Trachymyrmex*) *maritima* sp. nov.

*Worker* (Pl. VII, Figs. 7 and 8). — Length 4.5–5.5 mm.

Head, excluding the mandibles, as long as broad, deeply and angularly excised behind, with rather convex sides. Eyes large, flattened, a little in front of the middle of the head. Mandibles large, with 7–8 subequal, acute teeth. Clypeus sinuately excised in the middle of its somewhat flattened anterior border. Antennal scape extending between a fourth and a third of its length beyond the posterior corner of the head. Frontal carina dilated anteriorly to form a flat, rounded lobe over the antennal insertion, and continued back to the posterior corners of the head. Lateral carina running just inside the eye, forming the outer boundary of the antennal scrobe, and continued to the posterior corner of the head, where it ends in a prominent blunt spine. The frontal carina does not reach this spine, so that the two carinae are separate near their ends, the frontal terminating in a more indistinct spine of its own. The vertex has two median spines, and there is also a very prominent occipital spine on either side and still another smaller one further forward between the occipital and the eye. The two prominent spines on the posterior angle of the head are of the same size and shape. Thorax long and slender, much narrower than the head. Pronotum on either side with a long, blunt spine, but no median spines or tubercles between these on the anterior border of the segment. The inferior pronotal spine is long and blunt and directed downwards. The promesonotal are nearly as long as the superior pronotal spines, but broader at the base and more robust. They are blunt at the tip. Behind these are two pairs of much smaller spines, the posterior pair being very short. Epinotal spines long, slender, and acute. Petiole with a short peduncle in front, enlarging rapidly behind to form a node which is suboblong when seen from above, in profile acute above, with a straight ascending anterior slope and a more abrupt, slightly concave posterior declivity. The node is armed with four equidistant teeth. Postpetiole more than twice as broad as the petiole, as long as broad, its upper surface behind with a large subtriangular concavity. Gaster pyriform, distinctly longer than broad, broader behind than in front, its dorsal surface with three large longitudinal depressions extending over its basal half. Legs, especially the hind pair, long and slender.

Mandibles shining, punctate; toward their bases opaque and striate. Body, antennae, and legs opaque and uniformly granular, covered with small but very distinct tubercles, which occur also on the spines and large tubercles. On the base of the gaster these small tubercles are less abundant on the three longitudinal depressions and more closely aggregated on the ridges separating and bounding them. The small tubercles are absent also on the concave dorsal surface of the postpetiole.

Hairs short, curved, or hooked, black in some lights, yellowish in others, arising from the small tubercles only. Pubescence restricted to the funiculi of the antennae.

Head and gaster black or very dark brown. Thorax, petiole, postpetiole, mandibles, antennae, and legs varying from yellow to deep ferruginous brown; the concave portions of the thorax and pedicel more or less spotted with black or dark brown. Tibiae and antennal scapes darker in color than the femora and funiculi. Teeth and outer borders of the mandibles black.

This species is common on both Andros and New Providence Islands. On the former it was seen wherever I landed and searched for it—at Big Wood Key, Mangrove Key, and on several of the uncharted keys along the course of the Southern Bight and about Crawl Creek. In New Providence I found it only near Fort Charlotte. It prefers to nest in the pure foraminiferous sand of the seashore at or just above high-water mark. Its nests, which are inconspicuous and are most readily found by tracking foraging workers, are surmounted by a very flat moundlet  $1-1\frac{1}{2}$  ft. across, with a single somewhat excentric entrance  $\frac{1}{2}-\frac{3}{4}$  in. in diameter. This opening leads down into a chamber about as large as an egg some 8 in. below the surface, and this is apparently connected at a lower level with other similar chambers, which, however, are reached through crevices in the Æolian limestone, and cannot be excavated with the trowel. In one of the superficial chambers I unearthed a poorly developed fungus garden, closely resembling that of *A. (T.) septentrionalis* McCook. Like this species *A. (T.) maritima* collects buds, small flowers, bits of dead and living leaves, and caterpillar excrement as a substratum for its gardens. When rudely touched the workers fall over and 'feign death.' There are hardly more than 150 ants in a colony. At first I was inclined to believe that the species must be restricted to the sea beaches, but on walking inland about two miles from All Saints' Rectory at Mangrove Key, I found it nesting also in the clearings among the 'coppets,' wherever a small amount of soil in the cavities of the rough limestone has induced the negroes to plant maize, etc. Here the ants were busily engaged in cutting and collecting bits of green maize leaf, after the manner of the species of *Atta sensu stricto*. In other places, like Fort Charlotte, N. P., the ants were nesting in the dry, shady 'coppets,' but here, too, they inhabit inaccessible nests in the ubiquitous limestone.

*A. (T.) maritima* is very closely related to three other West Indian species of the subgenus *Trachymyrmex*: *urichii* Forel of Trinidad, *jamaicensis* E. André of Jamaica, and *smithii* of St. Vincent. It differs from the first and second in lacking the pair of prominent tubercles on the middle of the pronotum, from *urichii* also in its larger size, much longer scapes, and darker color. It is very closely related to *smithii*, and may prove to be merely a subspecies of this form, which I know only from Forel's description. *A. smithii* is described as more robust than *saussurei* Forel, but *maritima* is certainly more slender and graceful than this species. In *maritima* the frontal and lateral carinæ do not unite in a single tubercle on the posterior

angle of the head. The gaster, too, seems to be of a different shape. Forel describes two sets of smaller tubercles on the surface of his species: "de petits tubercules, densément repandus partout et gros comme les mailles d'une ponctuation réticulaire médiocrement fine, de gros tubercules plus espacés qui couvrent le corps et les pattes comme de mouchetures." This description certainly does not apply to *maritima*, which has only a single system of tubercles, apparently intermediate in size between the two systems occurring in *A. smithii*.

#### Subfamily DOLICHODERINÆ.

##### 41. *Tapinoma litorale* sp. nov.

*Worker*. — Length 1.25–1.5 mm.

Head, excluding the mandibles, a little longer than broad, as broad behind as in front, with convex cheeks and straight posterior border. Eyes small, with about 6–7 ommatidia in the longitudinal diameter, flattened, in front of the middle of the head. Mandibles multidenticulate along their entire inner edges, the teeth on the basal portion of the blade being very minute, but gradually increasing in length to the apex. Clypeus broadly rounded in front, slightly sinuate in the middle of the anterior border. Antennal scapes not reaching the posterior angles of the head; first funicular joint as long as the two succeeding joints, second joint broader than long; joints 3–10 subequal, hardly longer than broad, terminal as long as the three preceding joints, constricted at its base, so that it seems to form a one-jointed club. Thorax of the usual shape. Petiole with flattened upper surface, without a node. Basal segment of gaster concealing the petiole. Anus large and terminal.

Subopaque throughout, the surface of the body microscopically reticulate; mandibles feebly punctate.

Body, antennæ, and legs uniformly covered with very fine white pubescence. There are a few inconspicuous white hairs on the gaster, clypeus, and mandibles but none on the thorax.

Pale yellow; upper surface of body brownish in some specimens, which have also the posterior edges of the gastric segments broadly yellow. Eyes and mandibular teeth black.

*Female* (deâlated). — Length 3–3.5 mm.

Head distinctly narrowed in front. Antennal scape reaching to the posterior corner of the head; terminal joint less distinctly separated from the rest of the funiculus than in the worker. Gaster long and narrow.

Sculpture, pilosity, and pubescence as in the worker, except that the hairs at the tip of the gaster are more numerous.

Head and thorax yellow, with their dorsal surfaces dark brown. Gaster dark brown, posterior edges of segments broadly yellow. Antennæ, mouthparts, legs, and petiole yellow. Mandibular teeth and eyes black.

*Male*. — Length 1.3–1.5 mm.

Head large, excluding the mandibles and including the very large prominent eyes, as broad as long. Cheeks very short; postocular borders straight,

converging behind, posterior border straight. Ocelli large and protruding. Mandibles hardly as long as the eyes, acute, with finely and obscurely denticulate blades. Clypeus short, with straight anterior border. Antennal scape long, reaching to the posterior corner of the head, funicular joints subequal, distinctly longer than broad, terminal joint about  $1\frac{1}{2}$  times as long as the preceding. Thorax rather small, thickset; mesonotum not arched above, hardly as broad as the head. Epinotum sloping, faintly angular in profile. Gaster with large, exerted genitalia, the outer appendages of which are broadly rounded. Wings with one cubital and no discal cell.

Surface of body much more shining than in the worker, microscopically reticulate.

Hairs almost completely absent; pubescence much more dilute than in the worker.

Pale yellow; upper surface of head, thorax, and gaster brownish; antennae slightly infuscated, inner borders of mandibles black.

This species, which is sufficiently distinct from all the species of *Tapinoma* of which I have seen descriptions, was very common at Card's Point, Florida, along the Southern Bight, Andros Island, at West Bay, and about Nassau, N. P. (Fort Charlotte, Blue Hills, Hog Key, etc.). In all of these localities it was found nesting along the 'swashes' and beaches between the leaves of *Tillandsias*, in the hollow culms of *Uniola* and *Cladium*, or in the twigs of trees and bushes. It thus resembles in habits *T. ramulorum* Emery from Costa Rica. The nest entrance in the culms consisted of a little perforated papilla of gray vegetable paste made by the ants. This papilla projected slightly from the outer surface of the culm, and was often continued a short distance into the cavity inhabited by the insects. Males were found in all the nests opened during May and June. At Card's Point the species seemed to have a predilection for forming double nests with other ants; at any rate I found several colonies living in the same *Tillandsias* with colonies of *Cryptocerus varians*, *Pseudomyrma elongata*, or *Camponotus planatus*. These double nests were in all respects similar to those which I have described from Mexico as cases of parabiosis.

42. *Tapinoma melanocephalum* Fabr. — Three colonies of this tropicopolitan species were found in rotten wood near All Saints' Rectory, Andros Island.

43. *Tapinoma pruinosum* Roger. — Workers from a single colony found on Fish Hawk Key at the western end of the Southern Bight, Andros Island. Somewhat larger specimens were also taken at Planter on Key Largo, off the coast of Florida. Emery has recorded this



species from the "Bahamas" (Zool. Jahrb., Abth. f. Syst., Bd. 8, 1894, p. 333).

44. *Dorymyrmex pyramicus* Roger var. *niger* Pergande. — The only form of this common neotropical species which I have seen in the Bahamas. It is black, with a rather low epinotal cone. It occurs abundantly in the sand of the seashore above high-water mark on Andros (Dog Key, Nicholl's Town, Mangrove Key, etc.), and at West Bay on New Providence Island.

Subfamily CAMPONOTINÆ.

45. *Brachymyrmex heeri* Forel. — A single colony, including several winged females, of the typical form of this species, was found under a stone on a key in the Southern Bight, Andros Island, May 23.

46. *Brachymyrmex heeri* Forel var. *obscurior* Forel. — Very common in shady places under stones and logs in all the localities in which I collected on Andros and New Providence Islands. During May and June the nests contained numerous males and winged females.

47. *Brachymyrmex minutus* Forel — A small colony comprising several workers and two dealated females, which agree very closely with Forel's description of this species, was found at Nicholl's Town, Andros Island, under a stone in the shade of a 'coppet.'

48. *Prenolepis guatemalensis* Forel subsp. *antillana* Forel. — This form is common and widely distributed on Andros and New Providence. It nests under stones and logs in rather moist places. Males and winged females were found during May and June. The workers are somewhat larger and darker in color than a type from St. Vincent given me by Prof. Forel, but the genital valves of the male have the same form. It is very probable, as Forel suggests, that both the typical *guatemalensis* and its subspecies, *antillana*, should be regarded as subspecies of *P. fulva* Mayr.

49. *Prenolepis longicornis* Latr. — This tropicopolitan species, which is common in New Providence (Nassau and environs), but very sporadic on the eastern coast of Andros (Big Wood Key, Mangrove Key), where it seems to be of recent importation, occurs in houses and is known as the 'crazy ant' on account of its singular erratic movements. Winged females were taken from a nest in an old cocoanut shell on the beach of Big Wood Key, May 16.

50. *Prenolepis* sp. — A few workers of a small, black, thickset species of *Prenolepis*, from a key in the Southern Bight, Andros Island, represent some form which is certainly not *steinheili* Forel or any described subspecies of *fulva* or *guatemalensis*. As I have no males I refrain from describing the specimens as a new species.

51. *Camponotus maculatus* Fabr. subsp. *lucayanus* subsp. nov.

*Worker major* (Figs. P and Q). — Length 10–12 mm.

Head large, narrowed in front, posterior corners prominent, occipital border concave. Clypeus rather indistinctly keeled, its anterior lobe broad, with rounded corners and straight median border. Mandibles 8–9-toothed. Antennal scapes slender, not compressed at the base. Thorax narrow, pronotum about half as broad as the head; in profile much lower than in forms like subsp. *maccooki*, *vicinus*, etc.; evenly rounded; epinotum very flat, barely angular, basal surface nearly twice as long as the declivity. Hind femora without bristles on their flexor surfaces.

Mandibles glabrous, coarsely punctate. Head, thorax, and gaster sub-opaque, shagreened. Clypeus and cheeks with coarse and rather shallow elongate punctures or foveolæ; remainder

*Camponotus maculatus* Fabr. subsp. *lucayanus* subsp. nov.  
P, head of worker major; Q, same from side; R, head of worker minor.

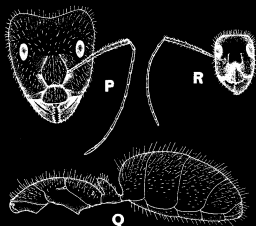
of the head more opaque, with smaller scattered punctures, except between the frontal carinae, where they are of the same size as on the cheeks. Antennal scapes punctate. Thorax and gaster somewhat shining.

Hairs abundant, yellow, erect, conspicuous on the cheeks, posterior portions of the head, front, antennal scapes, legs, thorax, petiole, and gaster. Pubescence on the prothorax and gaster yellow, long, sparse, and appressed; shorter and much denser on the antennal funiculi.

Ferruginous red. Mandibles, antennal scapes, upper surface of head and thorax, darker; gaster dark brown, almost black, with yellow posterior edges to the segments. Legs reddish yellow, tarsi and funiculi somewhat darker. Mandibular teeth, anterior border of clypeus, anterior corners of head, a cloud on the front, and external to each antennal insertion, black. In some specimens the whole thoracic dorsum is ferruginous red.

*Worker media*. — Length 7–9 mm.

Closely resembling the soldier except in the smaller size of the head, which



is only  $1\frac{1}{2}$  times as broad as the prothorax, and in smaller specimens is hardly broader behind than in front.

*Worker minor* (Fig. R). — Length 6–7.5 mm.

Head slender; including the mandibles, twice as long as broad, cheeks very straight and parallel, with prominent anterior angles. Clypeus broadly rounded in front, rather convex, and distinctly keeled. Thorax slender, in profile very low and flattened; basal surface of epinotum straight, almost concave, fully three times as long as the declivity, with which it forms a very obtuse angle.

Somewhat shining, body more coarsely, legs very finely, shagreened; mandibles punctate.

Erect hairs much less abundant than in the worker major, dense and short on the antennal scapes, but conspicuous on the cheeks, clypeus, dorsal surface of head, thorax, petiole, and gaster. Pubescence long and sparse on the head, prothorax, and gaster.

Reddish yellow, upper surface of head darker; gaster dark brown, with broadly yellow segmental incisures. Mandibular teeth black.

*Female*. — Length 11–12 mm.

Resembling the worker major. Epinotum with convex, rounded basal surface and flattened declivity. Petiole broad, compressed anteroposteriorly, with blunt dorsal edge; seen from behind the node is straight and transverse above, with rounded corners and slightly convex sides converging below.

Sculpture, pilosity, and color as in the worker major, but head more uniformly dark ferruginous above. Clouds on the mesonotum, scutellum, and metanotum brown. There is a black spot in front of the insertion of the fore wing. Wings pale yellowish hyaline, with yellow veins and stigma.

Described from specimens from some ten colonies collected both on Andros (Little Golding Key, Crawl Creek, Fish Hawk Key, and other keys along the course of the Southern Bight; Nicholl's Town) and New Providence (Menendez Sisal Plantation, Hog Key). The colonies nest in and under old palmetto logs and stumps. The winged females were taken in one of the colonies on Crawl Creek, May 22.

At first glance *C. lucayanus* is readily confounded with *C. abdominalis* subsp. *floridanus* Emery, on account of its bright ferruginous red color and conspicuous pilosity, but closer examination shows that it belongs to the *maculatus* group and is allied to the subsp. *tortuganus* Emery. This form, however, has no erect hairs on the cheeks and antennal scapes, and all the major workers I have seen—including a number which I have taken from large colonies containing males and winged females at Miami, Florida—have much smaller heads than the major workers of *C. lucayanus*. Through the var. *tephronotus* it passes over into forms like the subsp. *picipes* and its var. *pilosula* Forel of Mexico. *C. maculatus* subsp. *soulouquei* Forel seems also

[June, 1905.]

to be an allied form, but the worker major has opaque mandibles and a much less sloping epinotum according to Forel's description.

52. *Camponotus maculatus* Fabr. subsp. *lucayanus* var. *tephronotus* var. nov.

*Workers major, media, and minor.*—Head, thorax, and dorsal portion of petiole very dark brown, almost black; in other respects like the typical *lucayanus*.

*Female.*—Mandibles red, with black teeth. Upper surface of head, mesonotum, scutellum, metanotum, mesopleuræ, and basal surface of epinotum black. Pronotum clouded with brown and bordered with black behind. In other respects like the female of the typical *lucayanus*.

*Male.*—Length 7 mm.

Head small. Cheeks long, concave. Eyes and ocelli very large. Mandibles spatulate, blunt, and toothless. Thorax robust; mesonotum high, swollen,  $1\frac{1}{4}$  times as broad as the head; epinotum convex, evenly rounded. Petiole low, with a blunt, medially notched node. Genitalia very large and exerted, much more voluminous than in the larger males of *maccooki*, *vicinus*, *tortuganus*, etc.

Body subopaque, finely shagreened; clypeus, front, and cheeks finely punctate.

Hairs abundant, yellow, erect; longest on the head, both upper and lower surfaces, and gaster; scapes with suberect hairs. Pubescence very sparse and inconspicuous.

Yellow; upper surface of head, mesonotum, scutellum, epinotum, and mesopleuræ brown. Gaster dark brown, posterior margins of segments, genitalia, legs, and antennæ yellow. Wings suffused with yellow throughout, with yellow veins and stigma.

This variety was taken in only two localities: on High Key, a small island off the eastern coast of Andros, and in the 'pineyard' near Blue Hills, New Providence. In the former locality it was very common under stones among which the terns were nesting. Here I took the winged females, June 2. The colony found near Blue Hills was also nesting under a large stone and contained both males and winged females (June 27). The females in this colony had a median brown band, widest anteriorly, running the full length of the mesonotum.

53. *Camponotus inæqualis* Roger var. *ramulorum* var. nov.

*Worker major* (Figs. S and T).—Length 6–7.5 mm.

Belonging to the *maculatus* group. Head about as long as broad, subtriangular, much narrower in front than behind, sides rounded, posterior border straight. Mandibles with seven teeth, which gradually increase in length

towards the apex. Clypeus sharply carinate, produced into a broad lobe in front which is rounded on the sides and very faintly sinuate in the middle. Eyes large, flat, broadly elliptical, behind the middle of the head. Vertex with three small impressions simulating ocelli. Antennæ rather robust, scape not compressed at the base, enlarging towards the tip, which surpasses by a little more than its transverse diameter the posterior corner of the head. Thorax rather robust, prothorax three fifths as broad as the head, meso- and meta-thorax laterally compressed; in profile the thorax is rather high, evenly arched as far back as the beginning of the epinotal declivity, which forms a very blunt angle with the basal epinotal surface and is of about the same length. Petiole convex in front and flattened behind, with a rather sharp border which is hardly excised in the middle. Gaster and legs of the usual shape.

Body shining, very finely shagreened. Mandibles, clypeus, and anterior two thirds of the head sparsely punctate.

Hairs yellow, very sparse, erect, absent on the legs and antennæ, except at the tips of the scapes and femora. Each gastric segment has a single row of hairs along its posterior edge.

Yellow; mandibles reddish brown with black teeth. Head dark brown or black, especially on its upper surface, posterior corners yellow; the black portion extending back beyond the vertex in the form of a blunt point. Pronotum in the middle with a large dark brown or black triangular spot, broadest behind, sides with dark brown clouds; meso- and epinotum and pleuræ spotted with black or brown. Gaster with a broad dark brown band across each segment; on the second and third segments this band suddenly narrows on either side. Petiole and legs yellow; tarsi and antennæ reddish.

*Worker minor* (Fig. U). — Length 5-6 mm.

Head, excluding the mandibles,  $1\frac{1}{2}$  times as long as broad, with slightly rounded sides, not narrower in front than behind; posterior margin straight. Mandibles 6-toothed. Clypeus and eyes like those of the worker major. Antennal scape projecting about  $\frac{1}{2}$  its length beyond the posterior corner of the head. Thorax very similar to that of the worker major; in front somewhat narrower than the head. Petiole narrower, more obtuse, and seen from behind with a more convex border than in the worker major.

Sculpture and pilosity as in the worker major. The head and thorax in some specimens are uniformly yellow or have only a few pale brown clouds on their dorsal surfaces. The brown bands on the gaster are paler and narrower than in the worker major.

*Female*. — Length 12-13 mm.

Resembling the worker major. The head is narrower and the antennal scapes project somewhat further beyond the posterior corners. Epinotum rounded, with short basal and abrupt and longer declivity. Node of petiole broad, rather blunt, with a transverse, faintly sinuate upper border.



*Camponotus inaequalis* Roger var. *ramulorum* var. nov. S, head of worker major; T, body of same from side; U, head of worker minor.

Sculpture and pilosity as in the worker major. Mesonotum with a few piligerous punctures. Hairs on the thorax somewhat more abundant.

Sides of head more yellow than in the worker major. The mesonotum has a median, triangular, dark brown patch, broadest in front, and a dark cloud on either side. Scutellum and basal surface of epinotum dark brown; mesopleuræ clouded with brown. Bands on the gastric segments very broad, especially in the middle. Wings yellowish hyaline, with yellow veins and brown stigma.

*Male*. — Length 5–6 mm.

Head, including eyes and excluding mandibles, as long as broad, evenly rounded behind, narrower through the cheeks which are long and distinctly concave. Mandibles with a feeble tooth behind the apical tooth. Clypeus evenly rounded in front, convex and bluntly carinate in the middle. Antennæ very long, slender. Thorax robust, mesonotum projecting upward and forward; epinotum convex, faintly angular in profile. Petiole low and thick, with a very blunt node. Genitalia small and very slender. Legs long.

Smooth and rather shining, very finely shagreened, the head somewhat more distinctly than the thorax.

Dark brown; edges of sclerites, intersegmental constrictions of gaster, mandibles, funiculi, and genitalia yellow or sordid. Wings as in the female.

This form, which I do not hesitate to refer to Roger's *C. inæqualis* of Cuba, is far and away the most abundant species of the genus on Andros and New Providence Islands. It is nocturnal and forms small colonies like those of our *C. marginatus*, in the hollow twigs of trees or bushes and between the leaves of Tillandsias along the 'swashes' and 'coppets.' Specimens from many colonies were collected in the following localities: Blue Hills, Fort Charlotte, and Hog Key near Nassau, N. P., and on all the keys that were visited along the Southern Bight and about Crawl Creek in western Andros. Some specimens collected by Prof. C. H. Eigenmann near Havana, Cuba, in a dried bean-pod, belong to this same variety, which differs from the form described by Roger and the following variety in the large amount of black or dark brown on the head and thorax.

54. *Camponotus inæqualis* Roger var. *marcidus* var. nov.

All four phases differ from the corresponding forms of var. *ramulorum* in having much less brown or black on the head and thorax. In some colonies the worker major has the anterior third of the head dark brown, with a large yellow spot on the middle of the clypeus and a large brown blotch on the vertex. In others nearly the whole head is immaculate. The thorax of the worker major commonly has a conspicuous brown blotch on the mesopleuræ, and another smaller

one on the side of the pronotum. The female has only faint brownish clouds on the head and thorax. The males are yellow, with brown vertex, scutellum, and gaster, the intersegmental constrictions of which are broadly yellow.

This form, which is also common in hollow twigs and *Tillandsias*, occurs in various localities in Andros (Dog Key, along the Southern Bight, Big Wood Key, Mangrove Key, Little Golding Key). It approaches the typical form of the species very closely, but may stand as a variety till it is possible to study specimens of the form described by Roger.

55. *Camponotus landolti* Forel subsp. *zonatus* Emery var. *eburneus* var. nov.

Workers major and minor and female closely resembling the corresponding phases of *zonatus* specimens in the collection of the American Museum of Natural History from Olinda, Brazil, and Grenada, Nicaragua, except in the coloration of the gaster. In the worker minor the third and fourth gastric segments each have two large ivory-yellow spots, which are closely approximated but do not fuse in the middle; the corresponding spots on the first and second segments are united medially, the former by a broad, the latter by a very narrow band. In the worker major and the female the spots on the second segment remain disconnected. The female measures 11 mm.

Workers from a single colony found under a stone at Fort Charlotte near Nassau, and a solitary dealated female taken from a hollow twig on Hog Key, N. P.

56. *Camponotus* (*Colobopsis*) *culmicola* sp. nov.

*Soldier* (Pl. VII, Fig. 10). — Length 5.3–6.5 mm.

Very closely related to *Colobopsis impressus* Roger and *C. pylartes* Wheeler. Head subcylindrical, rectangular from above, a little longer than broad, sides parallel, occipital border straight, with rounded angles; anterior truncated surface concave with distinctly carinate edge on the sides, but rounded in the clypeal and adjacent regions. Mandibles with a convex ventral border, four teeth, and a short toothless proximal portion to the blade. Clypeus on the truncated surface nearly twice as long as broad, broadest above, extending on to the dorsal surface of the head as a transversely oblong piece twice as long as broad. A median carina runs the full length of the clypeus. Frontal carinae far apart, distinctly converging anteriorly, slightly convex exteriorly. Eyes moderate, flattened, their anterior orbits about  $\frac{1}{4}$  the distance from the posterior corner of the head to the tip of the mandibles. Antennal scapes slender, curved at the base, enlarging towards their tips which exceed the posterior corners of

the head by a distance about equal to their transverse diameter. Funicular joints subequal, except the first, which is nearly as long as the two succeeding joints together. Thorax more robust than that of *C. pylartes*, but less robust than that of *C. impressus*. Pronotum as long as broad, mesonotum nearly as long as broad. Mesoepinotal constriction deep and long; basal epinotal surface slightly convex, a little longer than the flattened declivity with which it forms almost a rounded right angle. Petiole very low, with a subcuboidal node, distinctly impressed in the middle above and behind. Gaster large, oblong elliptical, somewhat flattened dorsoventrally. Legs short, femora compressed, anterior pair distinctly dilated.

Mandibles opaque, finely punctate and obscurely reticulate-rugose. Anterior half of head subopaque, coarsely and rather regularly reticulate-rugose, the interrugal spaces being densely punctate. On the front and cheeks the sculpture passes over into shallow, umbilicately punctate foveolæ. Behind this region the surface for a short distance is very finely and densely punctate. Remainder of head and body shining, very finely but distinctly shagreened; meso- and epinotum subopaque.

Cheeks and anterior dorsal surface of head with short, erect, obtuse yellowish hairs. There are also a few erect white hairs on the vertex, tips of antennal scapes and femora, and on the gastric segments.

Dark brown, posterior two thirds of head darker, gaster and mandibular teeth black; remainder of mandibles and anterior third of head yellowish brown.

*Worker* (Pl. VII, Fig. 11). — Length 4-4.5 mm.

Head a little longer than broad, slightly broader behind than in front, cheeks convex. Mandibles 5-toothed, when closed having their outer borders more projecting than in the worker of *C. impressus*. Clypeus nearly square, obscurely keeled. Frontal carinæ converging in front. Antennæ more slender and proportionally longer than in the soldier, extending about  $\frac{1}{2}$  their length beyond the posterior corners of the head. Thorax and petiole resembling the corresponding parts of the soldier. Gaster proportionally smaller and more pointed.

Body and appendages subopaque, gaster and posterior portion of head shining; whole surface shagreened, more sharply on the head and thorax, so that these parts have a silky lustre. Cheeks and front with indistinct, scattered punctures.

Hairs and pubescence white, very sparse; the former confined to the head and gaster, the latter most conspicuous on the cheeks and legs.

Dark brown, antennæ somewhat paler in some specimens; gaster black, immaculate.

*Female*. — Length 6.5-7 mm.

Head like that of the soldier but more elongate and without carinate edges to the truncated portion in the region of the cheeks. Antennal scapes projecting about twice as far beyond the posterior corners of the head.

Sculpture and pilosity as in the soldier.

Dark brown; gaster black; anterior fourth of the head yellowish; articulations of the thorax and legs whitish; first, second, and third gastric segments



yellow at the base; the lighter color confined to the extreme base of the first segment, broad and conspicuous on the second, and on the third very narrow and often concealed, except at the sides, by the posterior edge of the second segment; ventral surfaces of the first and second segments more or less yellow. Wings whitish hyaline, with very pale yellow veins and stigma.

*Male.* — Length 4-4.5 mm.

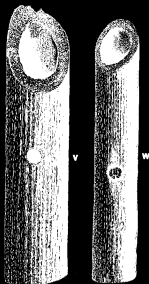
Head, including the mandibles, a little longer than broad, with prominent eyes and ocelli; cheeks slightly converging anteriorly, posterior corners broadly rounded. Mandibles pointed, toothless, overlapping when closed. Clypeus sharply keeled. Antennae slender; scape more than half as long as the funiculus, which is filiform and consists of subequal joints, with the exception of the conspicuously incrassated first joint. Thorax robust; mesonotum longer than broad, forming a regular ellipse with the scutellum. Epinotum steep, evenly rounded, so that basal and declivous surfaces are indistinguishable. Petiole very low, longer than high, thick and blunt above, somewhat impressed in the middle. Legs and gaster slender, the latter with slender genital appendages.

Shining throughout, finely shagreened, especially on the head and thorax.

Hairs whitish, much scattered, suberect, confined to the head and gaster. Pubescence lacking except on the antennal scapes.

Dark brown; head nearly black; mandibles, genitalia, articulation of the antennae, legs, thorax, and gaster sordid yellow. Wings like those of the female.

Many specimens of all four phases from the keys along the course of the Southern Bight, Andros Island, and near Blue Hills, N. P. The colonies were all found nesting in the hollow culms of *Cladium jamaicense* along the damp edges of the 'swashes.' The internode of the culm is perforated by the ants with a circular opening, which is exactly occluded by the head of the soldier guarding the nest (Figs. V and W). Sometimes the nests extend over several internodes of the same stem, and in such cases there may be two or more circular openings guarded by as many soldiers. One dealated female was found in the act of starting her colony. Males and winged females were abundant in the nests taken in the Southern Bight, May 23, but were absent or rare in the colonies taken in New Providence as late as June 25.



Pieces of culms of a sedge (*Cladium jamaicense*) inhabited by colonies of *Camponotus* (*Colobopsis*) *culmicola* sp. nov. V, shows circular nest entrance; W, the opening closed by the stopper-shaped head of a soldier.

It is doubtful whether *C. culmicola* should be regarded as more than a subspecies of *C. impressus* of Florida. The soldier of the new form is larger, and has a less convex and thickset thorax, but the other differences may be unimportant. *C. culmicola* differs from *C. pylartes* of Texas in not having inflated cheeks or yellow bands on the gaster in the soldier and worker, though these bands are present in the female. It would be permissible to regard *pylartes* also as a subspecies of *impressus*.

## A LIST OF THE KNOWN WEST INDIAN FORMICIDÆ.

## Subfamily Ponerinæ.

1. *Prionopelta punctulata* Mayr.

St. Vincent.—*Forel*, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 367-369. ♀ ♂.

2. *Paraponera clavata* Fabr.

Antilles.—*Dalla Torre*, Catalog. Hymenopt., VII, Formicidæ, 1893, p. 18.

3. *Emeryella schmitti* Forel.

Hayti.—*Forel*, Ann. Soc. Ent. Belg., XLV, 1901, pp. 334, 335. ♀.

4. *Ectatomma quadridens* Fabr.

St. Thomas (?).—*Mayr*, Verh. k. k. zool. bot. Ges. Wien, Jahrg., 1862, p. 732.

5. *Ectatomma (Holcoponera) concentricum* Mayr.

Jamaica.—*Er. André*, Rev. d'Entomol., 1893, p. 152.

6. *Platythyrea punctata* F. Smith.

San Domingo.—*F. Smith*, Cat. Hymenopt. Ins. Brit. Mus., Pt. 6, Formicidæ, 1858, p. 108. ♀ ♂.

St. Vincent.—*Forel*, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 358, 359. ♀ ♂.

Grenada.—*Forel*, Trans. Ent. Soc. London, 1897, Pt. 3, p. 298. ♀.

Barbados, Jamaica, Guadeloupe.—*Forel*, Rev. Suisse Zool., XI, F. 3, 1901, pp. 335, 336.

New Providence.—*Wheeler*, *antea*, p. 81. ♀ ♀.

Cuba.—*Wheeler*, *antea*, p. 81. ♀.

7. *Platythyrea angusta* Forel.

Antilles of Trinidad.—*Forel*, Rev. Suisse Zool., IX, F. 3, 1901, pp. 336, 337. ♀

8. *Pachycondyla (Pseudoponera) stigma* Fabr.

Andros.—*Wheeler*, *antea*, p. 81. ♀ ♀ ♂.

New Providence.—*Wheeler*, *antea*, p. 81. ♀ ♀.

9. *Pachycondyla (Pseudoponera) stigma* var. *attrita* Forel.

St. Vincent.—*Forel*, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 362, 363.

♀ ♀ ♂.

10. *Neoponera villosa* F. Smith.

Puerto Rico.—One worker in collection of Am. Mus. Nat. Hist. (C. T. Brues.)

11. *Ponera ergatandria* Forel.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 365-367.  
 ♀ ♀ ♂.

Andros.—Wheeler, *antea*, p. 82. ♀.

12. *Ponera fœda* Forel.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 364, 365. ♀ ♀.

13. *Ponera opaciceps* Mayr.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, p. 363. ♀.

New Providence.—Wheeler, *antea*, p. 82. ♀ ♀.

14. *Ponera succedanea* Roger.

Cuba.—Roger, Berl. Ent. Zeitschr., VII, 1863, p. 170. ♀ ♀ ♂.

15. *Ponera trigona* Mayr. var. *opacior* Forel.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 363, 364. ♀ ♀.

16. *Leptogenys arcuata* Roger.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 359, 360. ♀ ♂.

Grenada.—Forel, Trans. Ent. Soc. London, 1897, Pt. 3, p. 298. ♂.

17. *Leptogenys falcata* Roger.

Cuba.—Roger, Berl. Ent. Zeitschr., V, 1861, p. 42, No. 123. ♀. *Ibid.*, VI, 1862, p. 244, Taf. 1, fig. 14. ♀ ♂.

18. *Leptogenys mucronata* Forel.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 360, 361. ♀.

19. *Leptogenys pubiceps* Emery.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 361, 362. ♀ ♂.

Martinique.—One ♀ from Ft. de France, received from Prof. Forel (Coll. Am. Mus. Nat. Hist.).

20. *Leptogenys pubiceps* Emery var. *vincentensis* Forel.

St. Vincent.—Forel, Rev. Suisse Zool., IX, F. 3, 1901, p. 328. ♀.

21. *Leptogenys unistimulosa* Roger, var. *trinidadensis* Forel.

Trinidad.—Forel, Rev. Suisse Zool., IX, F. 3, 1901, p. 328. ♀.

22. *Anochetus mayri* Emery.

St. Thomas.—Emery, Ann. Mus. Civ. Genova, XXI, 1884, p. 378, No. 1. ♀;  
 Ann. Soc. Ent. France, (6) X, 1890, p. 65. ♀ ♀.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, p. 356. ♀ ♀.

Grenada.—Forel, Trans. Ent. Soc. London, 1897, Pt. 3, p. 298. ♀.

Martinique.—One ♀ received from Prof. Forel (Coll. Am. Mus. Nat. Hist.).

23. *Anochetus (Stenomymex) inermis* Er. André.

Trinidad.—Er. André, Rev. d'Entomol., VIII, 1889, p. 221. ♀.

Grenada.—Forel, Trans. Ent. Soc. London, 1897, Pt. 3, p. 298. ♀ ♂.

24. *Anochetus (Stenomymex) emarginatus* Fabr. subsp. *testaceus* Forel.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 356-358. ♀ ♂.

Grenada.—Forel, Trans. Ent. Soc. London, 1897, Pt. 3, p. 298. ♀.

New Providence.—Wheeler, *antea*, p. 82. ♀.

25. *Odontomachus hæmatodes* Linn.

St. Vincent.—*Forel*, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 353, 354. ♀♀.  
 Jamaica.—*Er. André*, Rev. d'Entomol., 1893, p. 152.

26. *Odontomachus hæmatodes* L. subsp. *insularis* Guérin.

Cuba.—*Guérin*, Iconogr. Régn. Animal, VII, Insect., 1845, p. 423, No. 2. ♀.—  
*Ramon*, Hist. fis. Cuba, VII, 1857, p. 757, T. 18, fig. 7. ♀♀♂♂.—*Roger*,  
 Berl. Ent. Zeitschr., V, 1861, p. 26, No. 80. ♀♂.  
 Grenada.—*Forel*, Trans. Ent. Soc. London, 1897, Pt. 3, p. 298. ♀♂.

27. *Odontomachus hæmatodes* L. subsp. *insularis* Guérin var. *hirsutiusculus* F. Smith.

St. Vincent.—*Forel*, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 354, 355. ♀♀.  
 Grenada.—*Forel*, Trans. Ent. Soc. London, 1897, Pt. 3, p. 298. ♀.

28. *Odontomachus hæmatodes* L. subsp. *insularis* Guérin var. *pallens* Wheeler.

Andros.—*Wheeler*, *antea*, p. 83. ♀♀♂♂.  
 New Providence.—*Ibid.*, p. 83. ♀♀♂♂.  
 Cuba.—*Ibid.*, p. 83. ♀.

29. *Odontomachus hæmatodes* L. subsp. *insularis* Guérin var. *ruginodis* Wheeler.

New Providence.—*Wheeler*, *antea*, p. 82. ♀♀.  
 Cuba.—*Ibid.*, p. 82. ♀.

## Subfamily DORYLINÆ.

30. *Eciton antillanum* Forel.

Grenada.—*Forel*, Trans. Ent. Soc. London, 1897, Pt. 3, pp. 299, 300. ♀.

31. *Eciton burchelli* Westwood var. *urichii* Forel.

Trinidad.—Three workers collected by Prof. Forel (Coll. Am. Mus. Nat. Hist.).

32. *Eciton klugi* Shuck.

St. Vincent.—*Shuckard*, Ann. Mag. Nat. Hist., 1, ser., vol. 260, 8, 1840. ♂.—  
*Westwood*, Arcan. Ent., I, 2, 1842, p. 75, No. 3. ♂.  
 Grenada.—*Forel*, Trans. Ent. Soc. London, 1897, Pt. 3, p. 298. ♂.

## Subfamily MYRMICINÆ.

33. *Pseudomyrma championi* Forel subsp. *haytiana* Forel.

Hayti.—*Forel*, Ann. Soc. Ent. Belg., XLV, 1901, p. 342. ♀.

34. *Pseudomyrma delicatula* Forel.

Jamaica.—*Forel*, Biol. Centr.-Am., Formicidæ, 1899-1900, p. 93. ♀♀.  
 St. Vincent.—*Forel*, Trans. Ent. Soc. London, 1893, Pt. 4, p. 389. ♀ (erroneously described as *P. flavidula* F. Sm.).

35. *Pseudomyrma delicatula* Forel var. *capperi* Forel.

Jamaica.—*Forel*, Biol. Centr.-Am., Formicidæ, 1899-1900, p. 93. ♀.

36. *Pseudomyrma elongata* Mayr.

St. Vincent.—*Forel*, Trans. Ent. Soc. London, 1893, Pt. 4, p. 390. ♀.  
 Andros.—*Wheeler*, *antea*, p. 86. ♀♀♂♂.  
 New Providence.—*Ibid.*, p. 86. ♀♀♂♂.

37. *Pseudomyrma elongata* Mayr. var. *cubaensis* Forel.

Cuba.—Forel, Ann. Soc. Ent. Belg., XLV, 1901, p. 342. ♀.

38. *Pseudomyrma flavidula* F. Smith.

Grenada.—Forel, Trans. Ent. Soc. London, 1897, Pt. 3, p. 300. ♀.

Andros.—Wheeler, *antea*, p. 85. ♀ ♀ ♂.New Providence.—*Ibid.*, p. 85. ♀ ♀ ♂.39. *Pseudomyrma pallida* F. Smith.

Trinidad.—Forel, Biol. Centr.-Am., Formicidæ, 1899-1900, p. 92.

40. *Pseudomyrma pilosula* F. Smith.

Barbados.—F. Smith, Trans. Ent. Soc. London, 1877, pp. 62, 63. ♀.

41. *Pseudomyrma variabilis* F. Smith.

Barbados.—F. Smith, Trans. Ent. Soc. London, 1877, p. 62. ♀.

42. *Xenomyrmex stolli* Forel subsp. *floridanus* Emery var. *lucayanus* Wheeler.Andros.—Wheeler, *antea*, p. 87. ♀.43. *Monomorium carbonarium* F. Smith subsp. *ebeninum* Forel.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, p. 388. ♀ ♀.

Grenada.—Forel, Trans. Ent. Soc. London, 1897, Pt. 3, p. 300. ♀ ♀ ♂.

Guadeloupe.—Several workers collected by Prof. Forel (Coll. Am. Mus. Nat. Hist.).

Andros.—Wheeler, *antea*, p. 88. ♀ ♀.New Providence.—*Ibid.*, p. 88. ♀ ♀ ♂.44. *Monomorium cinnabari* Roger.

Cuba.—Roger, Beff. Ent. Zeitschr., VII, 1863, pp. 199, 200. ♀.

45. *Monomorium destructor* Jerdon.

Jamaica.—Er. André, Rev. d'Entomol., 1893, p. 152.

46. *Monomorium omnivorum* (L.) Emery.

Jamaica.—Browne, Nat. Hist. Jamaica, 1756, p. 440.

Barbados.—Schomburgk, Hist. of Barbados, 1848, p. 639.

47. *Monomorium floricola* Jerdon.Cuba.—Roger, Berl. Ent. Zeitschr., VII, 1863, p. 199. ♀ ♀ (described as *M. pæcilum* Roger).

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 388, 389. ♀ ♀ ♂.

Jamaica.—Workers collected by Prof. L. H. Clarke (Coll. Am. Mus. Nat. Hist.).

Barbados.—Workers collected by Prof. Forel (Coll. Am. Mus. Nat. Hist.).

Andros.—Wheeler, *antea*, p. 87. ♀ ♀.New Providence.—*Ibid.*, p. 87. ♀ ♀ ♂.48. *Monomorium pharaonis* L.New Providence.—Wheeler, *antea*, p. 89. ♀.49. *Monomorium salomonis* L.New Providence.—Wheeler, *antea*, p. 89. ♀.

50. *Cardiocondyla emeryi* Forel.

St. Thomas.—Forel, Formicides in Grandidiér's Hist. Phys. Nat. et Polit. de Madagascar, XX, 1891, pp. 160, 161.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, p. 389. ♀.

New Providence.—Wheeler, *antea*, p. 89. ♀.

51. *Solenopsis azteca* Forel.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, p. 390. ♀.

52. *Solenopsis castor* Forel.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 391, 392. ♀ ♀.

Grenada.—Forel, Trans. Ent. Soc. London, 1897, Pt. 3, p. 300. ♀.

53. *Solenopsis corticalis* Forel var. *virgula* Forel.

Cuba.—Forel, Ann. Soc. Ent. Belg., XLVIII, 1904, p. 172. ♀.

54. *Solenopsis exigua* Forel.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, p. 395. ♀.

55. *Solenopsis geminata* Fabr.

Cuba.—Roger, Berl. Ent. Zeitschr., 6, 1862, p. 290.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 396-398. ♀ ♀ ♂.

Jamaica.—Er. André, Rev. d'Entomol., 1893, p. 152.

Grenada.—Forel, Trans. Ent. Soc. London, 1897, Pt. 3, p. 300. ♀ ♀.

Puerto Rico.—Numerous workers in Coll. Am. Mus. Nat. Hist.

New Providence.—Wheeler, *antea*, p. 90. ♀ ♀ ♂.

56. *Solenopsis globularia* F. Smith.

St. Thomas.—Forel, Mitth. Münch. Ent. Ver., I, 1881, p. 11, No. 11. ♀;

Bull. Soc. Vaud. Sc. Nat., (2) XX, pl. xci, 1884, p. 376.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 395, 396. ♀ ♀.

Grenada.—Forel, Trans. Ent. Soc. London, 1897, Pt. 3, p. 300. ♀ ♂.

Andros.—Wheeler, *antea*, p. 89. ♀.

57. *Solenopsis pollux* Forel.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 393-395. ♀ ♀ ♂.

58. *Solenopsis succinea* Emery.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, p. 398. ♀ ♀ ♂.

59. *Pheidole androsana* Wheeler.

Andros.—Wheeler, *antea*, p. 91. ♂ ♀.

60. *Pheidole cubaënsis* Mayr.

Cuba.—Mayr, Verh. k. k. zool. bot. Ges. Wien, Jahrg., 1862, pp. 99, 100.

♂ ♀.

61. *Pheidole decem* Forel.

Trinidad.—Forel, Ann. Soc. Ent. Belg., XLV, 1901, pp. 366, 367. ♂.

62. *Pheidole fallax* Mayr.

Cuba.—Mayr, Verh. k. k. zool. bot. Ges. Wien, XX, 1870, pp. 980, 984. ♂.

Grenada.—Forel, Trans. Ent. Soc. London, 1897, Pt. 3, p. 300. ♂ ♀.

Jamaica.—Forel, Ann. Soc. Ent. Belg., XLV, 1901, pp. 355, 356.

**63. *Pheidole fallax* Mayr var. *jelskii* Mayr.**

St. Vincent.—*Forel*, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 400, 401.

♂ ♀ ♂.

Trinidad; Little Antilles.—*Forel*, Ann. Soc. Ent. Belg., XLV, 1901, p. 356.

New Providence.—*Wheeler*, *antea*, p. 92. ♂ ♀ ♂.

**64. *Pheidole flavens* Roger.**

Cuba.—*Roger*, Berl. Ent. Zeitschr., VII, 1863, p. 198. ♂.

Andros.—*Wheeler*, *antea*, p. 92. ♂ ♀ ♂.

New Providence.—*Ibid.*, p. 93. ♂ ♀ ♂.

**65. *Pheidole flavens* Roger var. *vincentensis* Forel.**

St. Vincent.—*Forel*, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 411-414.

♂ ♀ ♂.

**66. *Pheidole flavens* Roger subsp. *sculptior* Forel.**

St. Vincent.—*Forel*, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 414, 415. ♂ ♀.

Martinique.—*Forel*, Ann. Soc. Ent. Belg., XLV, 1901, p. 366. ♂.

"West Indies."—*Forel*, Mitth. Naturhist. Mus. Hamburg, XVIII, Beiheft Jahrb. Hamb. Wiss. Anst., 18, 1901, p. 82.

**67. *Pheidole flavens* Roger subsp. *sculptior* Forel var. *grenadensis* Forel.**

Grenada.—*Forel*, Trans. Ent. Soc. London, 1897, Pt. 3, p. 300. ♂ ♀ ♂.

**68. *Pheidole flavens* Roger subsp. *gracilior* Forel.**

Trinidad.—*Forel*, Ann. Soc. Ent. Belg., XLV, 1901, p. 366. ♂.

"West Indies."—*Forel*, Mitth. Naturhist. Mus. Hamburg, XVIII, Beiheft, Jahrb. Hamb. Wiss. Anst., 1901, p. 78.

**69. *Pheidole godmani* Forel.**

St. Vincent.—*Forel*, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 404-406.

♂ ♀.

**70. *Pheidole guilelmi-mülleri* Forel subsp. *antillana* Forel.**

St. Vincent.—*Forel*, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 401-404.

♂ ♀ ♂.

**71. *Pheidole guilelmi-mülleri* Forel subsp. *antillana* Forel var. *nigrescens* Forel.**

St. Vincent.—*Forel*, Trans. Ent. Soc. London, 1893, Pt. 4, p. 404. ♂ ♀.

Grenada.—*Forel*, Trans. Ent. Soc. London, 1897, Pt. 3, p. 300. ♂ ♀ ♂.

**72. *Pheidole megacephala* Fabr.**

Bahamas.—*Emery*, Zool. Jahrb., Abth. f. Syst., VIII, 1894, p. 294.

St. Vincent.—*Forel*, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 417, 418. ♂ ♀.

Jamaica.—*Forel*, Ann. Soc. Ent. Belg., XLV, 1901, p. 342. ♂.

Cuba.—♂ ♀ in the Coll. Am. Mus. Nat. Hist. (C. F. Baker).

**73. *Pheidole orbica* Forel.**

St. Vincent.—*Forel*, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 415-417.

♂ ♀ ♂.

**74. *Pheidole punctatissima* Mayr subsp. *annectens* Wheeler.**

Andros.—*Wheeler*, *antea*, p. 93. ♂ ♀.

75. *Pheidole punctatissima* Mayr subsp. *insulana* Wheeler.Andros.—Wheeler, *antea*, p. 94. ♀♂.New Providence.—Wheeler, *antea*, p. 94.76. *Pheidole radoszkowskii* Mayr var. *luteola* Forel.St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 406-408. ♀♂.  
♀♂.77. *Pheidole radoszkowskii* Mayr var. *opacissima* Forel.

Jamaica.—Forel, Ann. Soc. Ent. Belg., XLV, 1901, p. 364. ♀♂.

78. *Pheidole subarmata* Mayr.

St. Lucia.—Forel, Ann. Soc. Ent. Belg., XLV, 1901, p. 365.

79. *Pheidole subarmata* Mayr var. *elongatula* Forel.St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 408-410. ♀♂.  
♀♂.80. *Pheidole subarmata* Mayr var. *nassavensis* Wheeler.New Providence.—Wheeler, *antea*, p. 92. ♀♂.81. *Pheidole susannæ* Forel subsp. *obscurior* Forel.St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 410, 411. ♀♂.  
♀♂.82. *Cremastogaster ashmeadi* Mayr.Andros.—Wheeler, *antea*, p. 94. ♀.83. *Cremastogaster brevispinosa* Mayr subsp. *minutior* Forel.St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 399-400. ♀♀.  
Grenada.—Forel, Trans. Ent. Soc. London, 1897, Pt. 3, p. 300.84. *Cremastogaster curvispinosa* Mayr var. *antillana* Forel.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, p. 399. ♀.

85. *Cremastogaster erecta* Mayr.Dominica.—Mayr, Verh. k. k. zool. bot. Ges. Wien, XVI, 1866, p. 902, pl. xx,  
fig. 12. ♀; Verh. k. k. zool. bot. Ges. Wien, XX, 1870, p. 991. ♀.86. *Cremastogaster lucayana* Wheeler.Andros.—Wheeler, *antea*, p. 95. ♀♀.New Providence.—*Ibid.*, p. 95. ♀♀.87. *Cremastogaster lucayana* Wheeler var. *etiolata* Wheeler.Andros.—Wheeler, *antea*, p. 96. ♀♀.88. *Cremastogaster sanguinea* Roger.

Cuba.—Roger, Berl. Ent. Zeitschr., VII, 1863, p. 208. ♀.

89. *Cremastogaster vicina* Er. André.

Jamaica.—Er. André, Rev. d'Entomol., 1893, pp. 151, 152. ♀.

90. *Cremastogaster victima* F. Smith var. *steinheilli* Forel.St. Thomas.—Forel, Mitth. Münch. Ent. Ver., V, 1, 1881, p. 15, No. 13. ♀.—  
Emery, Zool. Jahrb., Abth. f. Syst., VIII, 1894, p. 288, note.



Jamaica.—Worker and female collected by Prof. Forel (Coll. Am. Mus. Nat. Hist.).

Andros.—*Wheeler, antea*, p. 96. ♀ ♀ ♂.

91. *Pogonomyrmex schmitti* Forel.

Hayti.—*Forel*, Ann. Soc. Ent. Belg., XLV, 1901, pp. 339, 340. ♀.

92. *Macromischa androsana* Wheeler.

Andros.—*Wheeler, antea*, p. 98. ♀.

93. *Macromischa iris* Roger.

Cuba.—*Roger*, Berl. Ent. Zeitschr., VII, 1863, p. 188. ♀.

94. *Macromischa lucayensis* Forel.

Bahamas.—*Forel*, Ann. Soc. Ent. Belg., XLV, 1901, pp. 340-342. ♀.

95. *Macromischa lugens* Roger.

Cuba.—*Roger*, Berl. Ent. Zeitschr., VII, 1863, pp. 188, 189. ♀.

96. *Macromischa pastinifera* Emery.

Bahamas.—*Emery*, Bull. Soc. Ent. Ital. Ann., XXVII, 1896, p. 28, pl. i, fig. 18. ♀.

97. *Macromischa pastinifera* Emery var. *opacipes* Wheeler.

Andros.—*Wheeler, antea*, p. 96. ♀.

98. *Macromischa porphyritis* Roger.

Cuba.—*Roger*, Berl. Ent. Zeitschr., VII, 1863, pp. 185, 186. ♀.

99. *Macromischa pulchella* Emery.

St. Thomas.—*Emery*, Bull. Soc. Ent. Ital. Ann., XXVII, 1896, pp. 26, 27. ♀ ♀.

100. *Macromischa punicans* Roger.

Cuba.—*Roger*, Berl. Ent. Zeitschr., VII, 1863, pp. 189, 190. ♀.

101. *Macromischa purpurata* Roger.

Cuba.—*Roger*, Berl. Ent. Zeitschr., VII, 1863, pp. 184, 185. ♀.

102. *Macromischa sallei* Guérin.

San Domingo.—*Guérin*, Rev. et Magaz. Zool. (2), pl. iv., 1852, p. 73.—*Nylander*, Ann. Sc. Nat. (4), pl. v, 1856, p. 82.—*Roger*, Berl. Ent. Zeitschr., VI, 1862, p. 293, No. 29.—*Forel*, Biol. Centr.-Am. Formicidæ, 1899-1900, p. 57, note; Bull. Soc. Ent. Suisse, X, 7, p. 272.

103. *Macromischa splendens* Wheeler.

New Providence.—*Wheeler, antea*, p. 100. ♀ ♀ ♂.

104. *Macromischa squamifera* Roger.

Cuba.—*Roger*, Berl. Ent. Zeitschr., VII, 1863, pp. 186, 187. ♀.

105. *Macromischa versicolor* Roger.

Cuba.—*Roger*, Berl. Ent. Zeitschr., VII, 1863, pp. 187, 188. ♀.

106. *Rogeria curvipubens* Emery.

St. Thomas.—*Emery*, Bull. Soc. Ent. Ital. Ann., XXVII, 1896, pp. 54, 55. ♀ ♀.

Andros.—*Wheeler, antea*, p. 100. ♀.

107. *Rogeria foreli* Emery.St. Vincent.—*Forel*, Trans. Ent. Soc. London, 1893, Pt. 4, p. 383. ♀.St. Thomas.—*Emery*, Bull. Soc. Ent. Ital. Ann., XXVII, 1896, p. 55. ♀.108. *Tetramorium guineense* Fabr.San Domingo.—*Guérin*, Rev. et Mag. Zool. (2), 4, 1852, p. 79. ♀.—*Roger*, Berl. Ent. Zeitschr., V, 1861, p. 171.St. Vincent.—*Forel*, Trans. Ent. Soc. London, 1893, Pt. 4, p. 382. ♀.Andros.—*Wheeler*, *antea*, p. 100. ♀.109. *Tetramorium lucayanum* Wheeler.New Providence.—*Wheeler*, *antea*, p. 101. ♀.110. *Tetramorium simillimum* Nylander.St. Vincent.—*Forel*, Trans. Ent. Soc. London, 1893, Pt. 4, p. 382. ♀ ♀.Andros.—*Wheeler*, *antea*, p. 101. ♀ ♀ ♂.New Providence.—*Ibid.*, p. 101. ♀ ♀ ♂.111. *Wasmannia auropunctata* Roger.Cuba.—*Roger*, Berl. Ent. Zeitschr., VII, 1863, pp. 182, 185. ♀ ♀ ♂.St. Vincent.—*Forel*, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 383–386. ♀ ♀ ♂.Grenada.—*Forel*, Trans. Ent. Soc. London, 1897, Pt. 3, p. 300. ♀ ♀ ♂.112. *Wasmannia sigmoidea* Mayr.St. Vincent.—*Forel*, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 386–388. ♀ ♀ ♂.Grenada.—*Forel*, Trans. Ent. Soc. London, 1897, Pt. 3, p. 300. ♀.113. *Cryptocerus atratus* Linn.St. Thomas.—*Forel*, Mitth. Naturhist. Mus. Hamburg, XVIII, Beiheft, Jahrb. Hamb. Wiss. Anst., 1901, p. 50. ♀.114. *Cryptocerus hamulus* Roger.San Domingo.—*Roger*, Berl. Ent. Zeitschr., VII, 1863, pp. 209, 210. ♀.115. *Cryptocerus hamulus* Roger var. *haytianus* Forel.Hayti.—*Forel*, Ann. Soc. Ent. Belg., XLV, 1901, pp. 337, 338. ♀.116. *Cryptocerus hæmorrhoidalis* Latr.San Domingo.—*Latreille*, Hist. Nat. Fourmis, 1802, p. 276. ♀.—*Lepelletier*, Hist. Nat. Ins. Hymenopt., II, 1836, p. 172, No. 2.117. *Cryptocerus minutus* Fabr.St. Thomas.—*Mayr*, Verh. k. k. zool. bot. Ges. Wien, Jahrg., 1862, p. 116.118. *Cryptocerus pallens* Klug var. *araneolus* Smith.St. Vincent.—*F. Smith*, Trans. Ent. Soc. London (2), 2, Pt. 7, 1854, p. 223, No. 27, pl. xix., fig. 4. ♀; Trans. Ent. Soc. London (3), I, Pt. 4, 1862, p. 411, No. 29. ♀.—*Forel*, Trans. Ent. Soc. London, 1893, Pt. 4, p. 382. ♀.Grenada.—*Forel*, Trans. Ent. Soc. London, 1897, Pt. 3, p. 300. ♀.119. *Cryptocerus varians* F. Smith.Cuba.—*F. Smith*, Trans. Ent. Soc. London, 1876, p. 606, No. 4, pl. xi, fig. 6. ♀.Andros.—*Wheeler*, *antea*, p. 104. ♂ ♀ ♀ ♂.

120. *Strumigenys alberti* Forel.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 380, 381. ♀♀.

121. *Strumigenys eggersi* Emery.

St. Thomas.—Emery, Bull. Soc. Ent. Ital. Ann., XXII, 1890, p. 32, pl. vii, fig. 9. ♂♀.

122. *Strumigenys eggersi* Emery var. *vincentensis* Forel.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, p. 378. ♂.

123. *Strumigenys gundlachi* Roger.

Cuba.—Roger, Berl. Ent. Zeitschr., VII, 1862, pp. 253, 254. ♂ (excl. ♀).

124. *Strumigenys imitator* Mayr.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, p. 377. ♂.

125. *Strumigenys lanuginosa* Wheeler.

New Providence.—Wheeler, *antea*, p. 105. ♂♀.

126. *Strumigenys margaritæ* Forel.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 378-380. ♂  
♀♂.

127. *Strumigenys membranifera* Emery subsp. *simillima* Emery.

St. Thomas.—Emery, Bull. Soc. Ent. Ital. Ann., XXII, 1890, pp. 32, 33, pl. viii, fig. 5. ♂.

128. *Strumigenys rogeri* Emery.

St. Thomas.—Emery, Bull. Soc. Ent. Ital. Ann., XXII, 1890, pp. 31, 32, pl. vii, fig. 6. ♂.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, p. 378. ♂♀.

129. *Strumigenys smithii* Forel.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 375-377. ♂  
♀♂.

Grenada.—Forel, Trans. Ent. Soc. London, 1897, Pt. 3, p. 300. ♀.

130. *Epitritus emmæ* Emery.

St. Thomas.—Emery, Bull. Soc. Ent. Ital. Ann., XXII, 1890, p. 33, pl. viii, fig. 6. ♂.

131. *Apterostigma mayri* Forel.

Trinidad.—Forel, Ann. Soc. Ent. Belg., XXXVII, 1893, pp. 604, 605. ♂.—  
Urlich, Trinidad Field Nat. Club, II, No. 7, Apr. 1895, pp. 180, 181.

132. *Apterostigma urichii* Forel.

Trinidad.—Forel, Ann. Soc. Ent. Belg., XXXVII, 1893, pp. 603, 604. ♂.—  
Urlich, Trinidad Field Nat. Club, II, No. 7, Apr. 1895, p. 180.

133. *Cyphomyrmex foxii* Er. André.

Jamaica.—Er. André, Rev. d'Entomol., XI, 1892, p. 55. ♂.

[June, 1905.]

134. *Cyphomyrmex rimosus* Spinola.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 374, 375. ♀  
♀ ♂.

Trinidad.—Urich, Trinidad Field Nat. Club, II, No. 7, Apr. 1895, p. 181.

Grenada.—Forel, Trans. Ent. Soc. London, 1897, Pt. 3, p. 300. ♀.

135. *Cyphomyrmex rimosus* Spinola subsp. *minutus* Mayr.

Cuba.—Mayr, Verh. k. k. zool. bot. Ges. Wien, Jahrg., 1862, p. 691. ♀.

St. Thomas.—Emery, Bull. Soc. Ent. Ital. Ann., XXVIII, 1896, p. 90. ♂.

New Providence.—Wheeler, *antea*, p. 106. ♀ ♀ ♂.

136. *Sericomyrmex opacus* Mayr.

Trinidad.—Urich, Trinidad Field Nat. Club, II, No. 7, Apr. 1895, p. 179;

Trans. Ent. Soc. London, Pt. 1, Apr. 1895, pp. 77, 78.

137. *Atta cephalotes* Linn.

Trinidad.—Urich, Trinidad Field Nat. Club, II, No. 7, Apr. 1895, pp. 175-177.

138. *Atta cephalotes* L. var. *lutea* Forel.

Barbados.—Forel, Ann. Soc. Ent. Belg., XXXVII, 1893, pp. 587, 588. ♀.

139. *Atta insularis* Guérin.

Cuba.—Guérin, Iconogr. Régn. Animal, VII, Insect., 1845, p. 422, No. 3. ♀.—

Mayr, Reise d. Novara, II, 1, Formicidæ, 1865, p. 82. ♀ ♀ ♂.

140. *Atta sexdens* Linn.

Trinidad.—Urich, Trinidad Field Nat. Club, II, No. 7, Apr. 1895, p. 175.

141. *Atta* (*Acromyrmex*) *octospinosa* Reich.

Trinidad.—Forel, Ann. Soc. Ent. Belg., XXXVII, 1893, pp. 594-596. ♀ ♀ ♂.—

Urich, Trinidad Field Nat. Club, II, No. 7, Apr. 1895, pp. 177, 178.

142. *Atta* (*Trachymyrmex*) *jamaicensis* Er. André.

Jamaica.—Er. André, Rev. d'Entomol., 1893, p. 149. ♀.

143. *Atta* (*Trachymyrmex*) *maritima* Wheeler.

Andros.—Wheeler, *antea*, p. 108. ♀.

New Providence.—*Ibid.*, p. 108. ♀.

144. *Atta* (*Trachymyrmex*) *sharpii* Forel.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 372, 373. ♀.

145. *Atta* (*Trachymyrmex*) *urichii* Forel.

Trinidad.—Forel, Ann. Soc. Ent. Belg., XXXVII, 1893, pp. 601, 602. ♀ ♂.—

Urich, Trinidad Field Nat. Club, II, No. 7, Apr. 1895, pp. 178, 179.

146. *Atta* (*Mycocarpus*) *smithii* Forel.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 370-372. ♀.

## Subfamily DOLICHODERINÆ.

147. *Dolichoderus bidens* Linn.

Trinidad.—Forel, Ann. Soc. Ent. Belg., XLVII, 1903, pp. 257, 258.

148. *Dolichoderus bidens* Linn. var. *spurius* Forel.

Trinidad.—Forel, Ann. Soc. Ent. Belg., XLVII, 1903, p. 258. ♀ ♀.

149. *Dolichoderus bispinosus* Oliv.

St. Thomas.—Mayr, Verh. k. k. zool. bot. Ges. Wien, Jahrg., 1862, pp. 59, 60.  
 ♀; *ibid.*, pp. 707, 708. ♀ = *Hypoclinea vestita* Mayr.).

Trinidad.—Forel, Biol. Centr.-Am., Formicidæ, 1899-1900, pp. 98, 99.

150. *Dolichoderus lutosus* F. Smith var. *nigriventris* Forel.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, p. 351. ♀.

Trinidad.—Forel, Biol. Centr.-Am., Formicidæ, 1899-1900, pp. 99, 100.

151. *Azteca alfaroi* Emery subsp. *lucidula* Forel.

Trinidad.—Forel, Biol. Centr.-Am., Formicidæ, 1899-1900, p. 113. ♀ ♀ ♂.

152. *Azteca chartifex* Forel.

Trinidad.—Forel, Boll. Mus. Zool. Torino, XI, No. 230, p. 4, nota, fig. 5, 1896;  
 Biol. Centr.-Am., Formicidæ, 1899-1900, p. 117.

153. *Azteca delpini* Emery subsp. *antillana* Forel.

St. Lucia.—Forel, Biol. Centr.-Am., Formicidæ, 1899-1900, p. 111. ♀.

154. *Azteca delpini* subsp. *antillana* var. *guadeloupensis* Forel.

Guadeloupe.—Forel, Biol. Centr.-Am., Formicidæ, 1899-1900, p. 111. ♀.

155. *Azteca foreli* Emery subsp. *ursina* Forel.

Trinidad.—Forel, Biol. Centr.-Am., Formicidæ, 1899-1900, p. 112. ♀ ♂.

156. *Azteca velox* Forel var. *trinidadensis* Forel.

Trinidad.—Forel, Biol. Centr.-Am., Formicidæ, 1899-1900, p. 109. ♀ ♀.

157. *Tapinoma litorale* Wheeler.

Andros.—Wheeler, *antea*, p. 110. ♀ ♀ ♂.

New Providence.—*Ibid.*, p. 110. ♀ ♀ ♂.

158. *Tapinoma melanocephalum* Fabr.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, p. 352. ♀ ♀.

Jamaica.—Er. André, Rev. d'Entomol., 1893, p. 152.

Andros.—Wheeler, *antea*, p. 110. ♀ ♀.

159. *Tapinoma pruinatum* Roger.

Cuba.—Roger, Berl. Ent. Zeitschr., VII, 1863, p. 165. ♀.

"Bahamas."—Emery, Zool. Jahrb., Abth. f. Syst., VIII, 1894, p. 333. ♀.

Andros.—Wheeler, *antea*, p. 110. ♀.

160. *Dorymyrmex pyramicus* Roger.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 352, 353. ♀ ♂.

Grenada.—Forel, Trans. Ent. Soc. London, 1897, Pt. 3, p. 298. ♀.

161. *Dorymyrmex pyramicus* Roger var. *niger* Pergande.

Andros.—Wheeler, *antea*, p. 111. ♀.

New Providence.—*Ibid.*, p. 111. ♀.

162. *Forelius maccooki* Forel.

Jamaica.—Forel, Biol. Centr.-Am., Formicidæ, 1899-1900, pp. 102, 103.

163. *Iridomyrmex analis* Er. André.

Cuba.—Three workers in collection Am. Mus. Nat. Hist. (C. F. Baker).

164. *Iridomyrmex iniquus* Mayr.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, p. 351. ♀.

## Subfamily CAMPONOTINÆ.

165. *Plagiolepis flavidula* Roger.

Cuba.—Roger, Berl. Ent. Zeitschr., VII, 1863, p. 162. ♀.

166. *Acropyga* (*Rhizomyrma*) *smithii* Forel.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, p. 349. ♀.

167. *Brachymyrmex heeri* Forel.Andros.—Wheeler, *antea*, p. III. ♂ ♀.168. *Brachymyrmex heeri* Forel var. *obscurior* Forel.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 345, 346. ♀ ♂.

Grenada.—Forel, Trans. Ent. Soc. London, 1897, Pt. 3, p. 298. ♂ ♂.

Andros.—Wheeler, *antea*, p. III. ♂ ♀ ♂.New Providence.—*Ibid.*, p. III. ♂ ♀ ♂.169. *Brachymyrmex minutus* Forel.

St. Thomas and St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 346, 347. ♀ ♀.

Andros.—Wheeler, *antea*, p. III. ♂ ♀.170. *Myrmelachista ambigua* Forel.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 349, 350. ♀.

171. *Myrmelachista kraatzii* Roger.

Cuba.—Roger, Berl. Ent. Zeitschr., VII, 1863, p. 163. ♀.

172. *Myrmelachista rogeri* Er. André.

Cuba.—Er. André, Rev. d'Entomol., VI, 1887, p. 288. ♀.

173. *Prenolepis anthracina* Roger.

Cuba.—Roger, Berl. Ent. Zeitschr., VII, 1863, pp. 161, 162. ♀.

174. *Prenolepis gibberosa* Roger.

Cuba.—Roger, Berl. Ent. Zeitschr., VII, 1863, p. 161. ♀.

175. *Prenolepis fulva* Mayr.

Hayti.—Forel, Mitth. Naturhist. Mus. Hamb., XVIII, Beiheft, Jahrb. Hamb. Wiss. Anst., 1901, p. 65.

176. *Prenolepis fulva* Mayr subsp. *pubens* Forel.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 338, 339. ♀ ♀ ♂.

177. *Prenolepis guatemalensis* Forel subsp. *antillana* Forel.

St. Vincent.—Forel, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 340-342. ♀ ♀ ♂.

Grenada.—Forel, Trans. Ent. Soc. London, 1897, Pt. 3, Sept., p. 298. ♀ ♀ ♂.

Andros.—Wheeler, *antea*, p. III. ♂ ♀ ♂.New Providence.—*Ibid.*, p. III. ♂ ♀ ♂.

**178. *Prenolepis longicornis* Mayr.**

- St. Vincent.—*Forel*, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 337, 338. ♀ ♀ ♂.  
 Grenada.—*Forel*, Trans. Ent. Soc. London, 1897, Pt. 3, Sept., p. 298. ♀ ♀.  
 Andros.—*Wheeler*, *antea*, p. 111. ♀ ♀.  
 New Providence.—*Ibid.*, p. 111. ♀ ♀.

**179. *Prenolepis nodifera* Mayr.**

- Antilles.—*Dalla Torre*, Catalog. Hymenopt., VII, 1893, p. 179.

**180. *Prenolepis steinheili* Forel.**

- St. Vincent.—*Forel*, Trans. Ent. Soc. London, 1893, Pt. 4, p. 342. ♀.

**181. *Prenolepis steinheili* Forel var. *minuta* Forel.**

- St. Vincent.—*Forel*, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 343-345. ♀ ♀ ♂.

**182. *Prenolepis* sp.**

- Andros.—*Wheeler*, *antea*, p. 112. ♀.

**183. *Camponotus abdominalis* Fabr.**

- Trinidad.—*Forel*, Ann. Soc. Ent. Belg., XLVI, 1902, p. 170.

**184. *Camponotus abdominalis* Fabr. *opaciceps* Roger.**

- Grenada.—*Forel*, Trans. Ent. Soc. London, 1897, Pt. 3, Sept., p. 297. ♀ ♀ ♂.

**185. *Camponotus abdominalis* Fabr. subsp. *sharpi* Forel.**

- St. Vincent.—*Forel*, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 335-337. 7 ♀  
 ♀ ♂; Biol. Centr.-Am., Formicidæ, 1899-1900, p. 133.

**186. *Camponotus auricomus* Roger var. *lucianus* Forel.**

- St. Lucia.—*Forel*, Biol. Centr.-Am., Formicidæ, 1899-1900, p. 139. ♀ ♀;  
 Ann. Soc. Ent. Belg., XLVI, 1902, p. 172.

**187. *Camponotus auricomus* Roger var. *vincentensis* Forel.**

- St. Vincent.—*Forel*, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 334, 335. ♀ ♀;  
 Biol. Centr.-Am., Formicidæ, 1899-1900, pp. 139, 140.

**188. *Camponotus brettlesi* Forel.**

- Trinidad.—*Forel*, Ann. Soc. Ent. Belg., XLVI, 1902, p. 171.

**189. *Camponotus capperi* Forel.**

- Jamaica.—*Forel*, Biol. Centr.-Am., Formicidæ, 1899-1900, p. 138. 7 ♀.

**190. *Camponotus capperi* Forel var. *corticalis* Forel.**

- Jamaica.—*Forel*, Biol. Centr.-Am., Formicidæ, 1899-1900, p. 138. ♀; Ann.  
 Soc. Ent. Belg., XLVI, 1902, p. 172.

**191. *Camponotus chazaliei* Forel.**

- St. Lucia.—*Forel*, Biol. Centr.-Am., Formicidæ, 1899-1900, pp. 149, 150. ♀;  
 Ann. Soc. Ent. Belg., XLVI, 1902, p. 172.

**192. *Camponotus claviscapus* Forel.**

- Trinidad.—*Forel*, Biol. Centr.-Am., Formicidæ, 1899-1900, pp. 152, 153.  
 7 ♀ ♂.

**193. *Camponotus conspicuus* F. Smith.**

- Jamaica.—*F. Smith*, Cat. Hymenopt. Brit. Mus., VI, 1858, p. 48, No. 159 ♀.  
 Trinidad.—*Forel*, Ann. Soc. Ent. Belg., XLVI 1902, p. 171.

194. *Camponotus fragilis Pergande* var.Hayti.—*Forel*, Ann. Soc. Ent. Belg., XLV, 1901, p. 371. ♀.195. *Camponotus fugax Forel*.Jamaica.—*Forel*, Ann. Soc. Ent. Belg., XLVI, 1902, pp. 173, 174. ㄥ♂.196. *Camponotus fumidus Roger*.Hayti.—*Dalla Torre* Catalog. Hymenopt., VII, 1893, p. 232.197. *Camponotus gilviventris Roger*.Cuba.—*Roger*, Berl. Ent. Zeitschr., VII, 1863, pp. 145, 146. ♀.198. *Camponotus hannani Forel*.Jamaica.—*Forel*, Biol. Centr.-Am., Formicidæ, 1899-1900, pp. 131, 132, nota. ㄥ♂; Ann. Soc. Ent. Belg., XLVI, 1902, p. 170.199. *Camponotus hannani Forel* subsp. *willardi Forel*.Jamaica.—*Forel*, Biol. Centr.-Am., Formicidæ, 1899-1900, p. 132, nota. ♀.200. *Camponotus inæqualis Roger*.Cuba.—*Roger*, Berl. Ent. Zeitschr., VII, 1863, pp. 147, 148. ㄥ♂♀:201. *Camponotus inæqualis Roger* var. *ramulorum Wheeler*.Andros and New Providence.—*Wheeler*, *antea*, p. 116. ㄥ♂♀♂.Cuba.—*Ibid.*, p. 116.202. *Camponotus inæqualis Roger* var. *marcidus Wheeler*.Andros.—*Wheeler*, *antea*, p. 117. ㄥ♂♀♂.203. *Camponotus landolti Forel* subsp. *zonatus Emery* var. *eburneus Wheeler*.New Providence.—*Wheeler*, *antea*, p. 117. ㄥ♂♀.204. *Camponotus maculatus Fabr.* subsp. *lucayanus Wheeler*.Andros and New Providence.—*Wheeler*, *antea*, p. 113. ㄥ♂♀.205. *Camponotus maculatus Fabr.* subsp. *lucayanus Wheeler* var. *tephronotus Wheeler*.Andros and New Providence.—*Wheeler*, *antea*, p. 114. ㄥ♂♀♂.206. *Camponotus maculatus Fabr.* subsp. *soulouquei Forel*.Hayti.—*Forel*, Mitth. Naturhist. Mus. Hamb., XVIII, Beiheft. Jahrb. Hamb. Wiss. Anst., 1901, p. 68. ㄥ.207. *Camponotus planatus Roger*.Cuba.—*Roger*, Berl. Ent. Zeitschr., VII, 1863, pp. 148, 149. ♀♀♂. *Forel*, Bull. Soc. Vaud. Sci. Nat. (2), XVI, 1879, p. 97. ㄥ♂; *ibid.*, XX, 1884, p. 346; Ann. Soc. Ent. Belg., XLV, 1901, p. 371. ♀.208. *Camponotus ruficeps Fabr.* (= *sexguttatus Fabr.*).St. Croce.—*Fabricius*, Syst. Piez., 1804, p. 401.St. Vincent.—*F. Smith*, Cat. Br. Mus. Formicid., p. 50, No. 171, 1858. ㄥ♂ (= *bimaculatus* F. Sm.). *Forel*, Trans. Ent. Soc. London, 1893, Pt. 4, pp. 333, 334. ㄥ♂♀.St. Thomas.—*Emery*, Boll. Mus. Zool. Anat. Comp. R. Univ. Torino, IX, No. 187, 1894, p. 1.



Martinique, Guadeloupe, Barbados, St. Lucia.—*Forel*, Trans. Ent. Soc. London, 1897, Pt. 3, Sept., pp. 297, 298; Ann. Soc. Ent. Belg., XLVI, 1902, p. 172.

209. *Camponotus ruficeps* Fabr. var. *grenadensis* Forel.

Grenada.—*Forel*, Trans. Ent. Soc. London, 1897, Pt. 3, Sept., p. 297. ♀ ♀ ♂.  
Barbados.—*Forel*, Ann. Soc. Ent. Belg., XLVI, 1902, pp. 172, 173.

210. *Camponotus sphaeralis* Roger.

Cuba.—*Roger*, Berl. Ent. Zeitschr., VII, 1863, p. 147. ♀.

211. *Camponotus sphaericus* Roger.

Cuba.—*Roger*, Berl. Ent. Zeitschr., VII, 1863, p. 146. ♀.

212. *Camponotus saussurei* Forel.

St. Thomas.—*Forel*, Bull. Soc. Vaud. Sc. Nat. (2), XVI, P. 81, 1879, p. 103, pl. i, fig. 3. ♀.

213. *Camponotus urichii* Forel.

Trinidad.—*Forel*, Biol. Centr.-Am., Formicidae, 1899-1900, pp. 155, 156. ♀ ♀.

214. *Camponotus ustus* Forel.

St. Thomas.—*Forel*, Bull. Soc. Vaud. Sc. Nat. (2), XVI, P. 81, 1879, p. 75. ♀ ♀ ♂; Mitth. Naturhist. Mus. Hamb., XVIII, Beiheft Jahrb. Hamb. Wiss. Anst., 1901, p. 70. ♀ ♀.

215. *Camponotus zoc* Forel.

Trinidad.—*Forel*, Bull. Soc. Ent. Suisse, X, 7, p. 285; Biol. Centr.-Am., Formicidae, 1899-1900, p. 142. ♀; Ann. Soc. Ent. Belg., XLVI, 1902 p. 171.

216. *Camponotus* (*Colobopsis*) *culmicola* Wheeler.

Andros.—*Wheeler*, *antea*, p. 119. ♀ ♀ ♂.

New Providence.—*Ibid.*, p. 119. ♀ ♀ ♂.

217. *Camponotus* (*Colobopsis*) *riehlii* Roger.

Cuba.—*Roger*, Berl. Ent. Zeitschr., VII, 1863, pp. 159, 160. ♀.

# DESCRIPTION OF PLATE VII.

- Fig. 1. *Cryptocerus varians* F. Smith. Soldier.  
 2. " " Lateral aspect.  
 3. " " Head, dorsal aspect.  
 4. " " Worker.  
 5. " " Female. Lateral aspect, with left pair of wings removed.  
 6. " " Male. Lateral aspect, with left pair of wings removed.  
 7. *Atta (Trachymyrmex) maritima* sp. nov. Worker.  
 8. " " " Lateral aspect.  
 9. *Macromischa splendens*, sp. nov. Worker; lateral aspect.  
 10. *Camponotus (Colobopsis) culmicola* sp. nov. Soldier; lateral aspect.  
 11. " " " Worker. Lateral aspect.